



1368 Research Park Dr  
Beavercreek, Ohio

**BEAVERCREEK BOARD OF ZONING APPEALS**  
**Regular Meeting – January 10, 2018, 6:00 p.m.**  
***Council Chambers***

- I. CALL TO ORDER
- II. ROLL CALL
- III. APPROVAL OF AGENDA
- IV. APPROVAL OF MINUTES
  - A. July 12, 2017
- V. PUBLIC HEARINGS
  - A. CU-18-1, OH Exchange Facilities Networks, LLC
- VI. ADJOURNMENT

BEAVERCREEK BOARD OF ZONING APPEALS  
REGULAR MEETING, July 12, 2017, 6:00 PM

PRESENT: Mr. Hung, Mr. Morter, Mr. Raber

ABSENT: Mr. Hight, Mr. Kruse

Chairman Hung called the meeting to order followed by roll call.

Mr. Raber MOVED to excuse Mr. Hight and Mr. Kruse from the meeting, seconded by Mr. Morter. Motion PASSED by majority voice vote.

Mr. Raber MOVED approval of the agenda, seconded by Mr. Morter. Motion PASSED by majority voice vote.

Mr. Raber MOVED approval of the June 14, 2017 minutes, seconded by Mr. Morter

**PUBLIC HEARING**

**V-17-2, Brandon Hickman, 3166 Ibis Place (Request case remain tabled and public hearing continued.)**

Mr. Hung requested a motion be made to table this case because there is a measure before City Council which is in the reading process that has an effect on this variance case. He believed it was best to table the case until Council has approved/disapproved the ordinance.

Mr. Raber MOVED to table V-17-2 and continue the case, seconded by Mr. Morter. Motion PASSED by majority voice vote.

**V-17-3, Tyler Hofacker, 2976 Hohl Drive**

Clerk Gillaugh read the notice of public hearing on an application filed by Tyler Hofacker, 2976 Hohl Drive, Beavercreek, OH 45432, requesting a variance from Chapter 158.031(F)(1) of Beavercreek Zoning Code, requesting permission to construct a deck within the required fifty-foot setback from the north property line in an R-1A District. The property is located at the northeast corner of the intersection of Hohl Drive and Hanes Road further described as Book 5, Page 9, Parcel 21 on the Greene County Property Tax Atlas.

Tyler Hofacker stated he lives at the northeast corner of Hanes Road and Hohl Drive, and explained he does not have much of a back yard. He stated he has had a lot of landscaping done, and has leveled the area. He explained he would like to construct a ground-level deck for a nice entertainment area. Mr. Hofacker said they will not be able to see over the privacy fence, and stated he would like to have a variance to build the deck closer to the property line.

Ms. Pereira summarized the staff report dated July 7, 2017, which stated the applicant is requesting to construct a 15-foot by 28-foot deck, five feet from the rear property line. She explained the requirements of Chapter 158.031 (F)(1) and Chapter 158.110 (B) of the Zoning Code, and said the lot is a triple frontage lot. Ms. Pereira said this type of lot would not be something that would be done now, and was mostly likely a remnant parcel from something that was created before the City was incorporated. She explained it is a non-conforming lot, and it does create a lot of hardship and issues for the applicant. Ms. Pereira discussed a previous variance that was applied for in 2009 prior to Mr. Hofacker owning the property, and said it approved a swimming pool and a deck all the way up to the property line with a zero setback. She said the variance was granted but was never constructed. Staff recommended approval of the case with one condition.

There being no public input, the public hearing was closed.

Mr. Morter questioned that there was going to be a pool constructed at one time. Ms. Pereira said yes, and explained the deck was going to be in the side yard and was going to wrap around where Mr. Hofacker is proposing his deck. She stated normally they like to maintain some setback requirement, but this is a special case.

Mr. Hung asked if this deck will be raised and if there would be a fence or stairs coming from it. Mr. Hofacker said it will be a ground level deck and there will be stairs with handrails from the rear door to the deck. He estimated the height to be no more than eight inches high.

Mr. Raber MOVED to approve V-17-3 with one condition:

1. A Residential Zoning Permit must be approved by the Planning and Zoning Department prior to the construction of the deck.

Motion was seconded by Mr. Morter, and PASSED by unanimous voice vote.

**V-17-4, Jon McGugin, 1599C Beaver Valley Road**

Clerk Gillaugh read the notice of public hearing on an application filed by John & Shelly McGugin, 1599 Beaver Valley Road, Lot C, Beaver Creek, OH 45434, requesting a variance from Chapter 158.104 (E)(1)(b) of the City of Beaver Creek Zoning Code, requesting permission to construct an accessory structure that would exceed the maximum allowed square footage permitted for an accessory structure within a R-1A District. The property is located approximately 600 west of Beaver Valley Road, five lots south of the intersection of Beaver Valley Road and Lantz Road further described as Book 5, Page 18, Parcel 23 on the Greene County Auditor's Property Tax Atlas.

Jonathan McGugin, 1599C Beaver Valley Road, stated they moved in last year and immediately found out the existing two-car garage is inadequate for their needs. He explained the previous owner built a 10-foot by 12-foot shed to house the tools that are needed to maintain the five-acre parcel. Mr. McGugin said with the zoning of the

property, they are requested to exceed more than 50% rule for accessory structures. He explained the structure will hold all their tools, and he would like to have a workshop for private use. Mr. McGugin stated the structure will blend in with the environment and will match the house aesthetics as well.

Ms. Pereira summarized the staff report dated July 7, 2017, which stated the applicant is requesting a variance from Chapter 158.104 (E)(1)(b) of the City of Beavercreek's Zoning Code to allow for the construction of a 30-foot by 50-foot accessory structure. She discussed the location of the property, and said this is an estate lot off a private driveway. Ms. Pereira explained the Greene County GIS states the house is 1,812 square feet, and there is a detached structure that is not adequate and is not able to hold vehicles due to some structural issues. She said there is also a 10-foot by 12-foot shed that the applicant has already stated if they are allowed to build the pole barn it will be removed. Ms. Pereira stated the property is 5.466 acres and it is heavily wooded. She explained if this was a normal residential property, staff thought this kind of a request would be too large. Ms. Pereira said with the lot being over five acres it could be rezoned to agricultural, but that process can take up to six months and is a lot of work for staff and the applicant. She stated allowing them to apply for a variance is a much simpler process. Ms. Pereira explained if the property was zoned agricultural there are no limits on the size of accessory structures or the number of them. Staff recommended approval of the case with one condition.

In public input, Richard Reynolds, 1629 Applewood Drive, stated he is Mr. McGugin's neighbor and he owns the abutting property line closest to where the structure is proposed. He was in full support of his application.

James Howell, 1599 Beaver Valley Road, Lot D, stated he had no issues with the structure the McGugins want to construct. He explained he would not be able to see it, and the building will be secluded.

Michael Green, 1629 Applewood Drive, said he owned the nine acres to the west and he had no reservation of the structure being proposed. He was happy he came because he found out there is a possibility he can go agricultural. Mr. Green said he was in full support of the application.

There being no further public input, the public hearing was closed.

Mr. Hung explained he wasn't from the area, and when he has these hearings and someone is making a very reasonable request and there are neighbors coming out and supporting it, it is a bit heartwarming. He said this community had people that understand the difficulties that people face, and they understand the needs of their neighbors. Mr. Hung stated that made him feel good and positive at where he is too. He said generally speaking in residential areas that the City is usually reluctant to give such a large variance, but he concurred with staff that there is a different circumstance here and with the support of the neighbors he saw no reason to not allow the applicant to move forward with his plan.

Mr. Raber MOVED to approve V-17-3 with one condition:

1. An Accessory Structure Zoning Permit must be approved by the Planning and Zoning Department prior to the construction of the barn.

Motion was seconded by Mr. Morter, and PASSED by unanimous voice vote.

**ADJOURNMENT**

Mr. Raber MOVED adjournment at 6:22 p.m., seconded by Mr. Morter. Motion PASSED by majority voice vote.

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Melissa Gillaugh  
Deputy Clerk

January 5, 2018

STAFF REPORT  
CONDITIONAL USE REQUEST  
CASE NO. CU 18-1

I. CONDITIONAL USE REQUESTED BY:

OH Exchange Facilities Networks, LLC  
120 South Riverside Plaza  
Suite 120  
Chicago, IL 60606

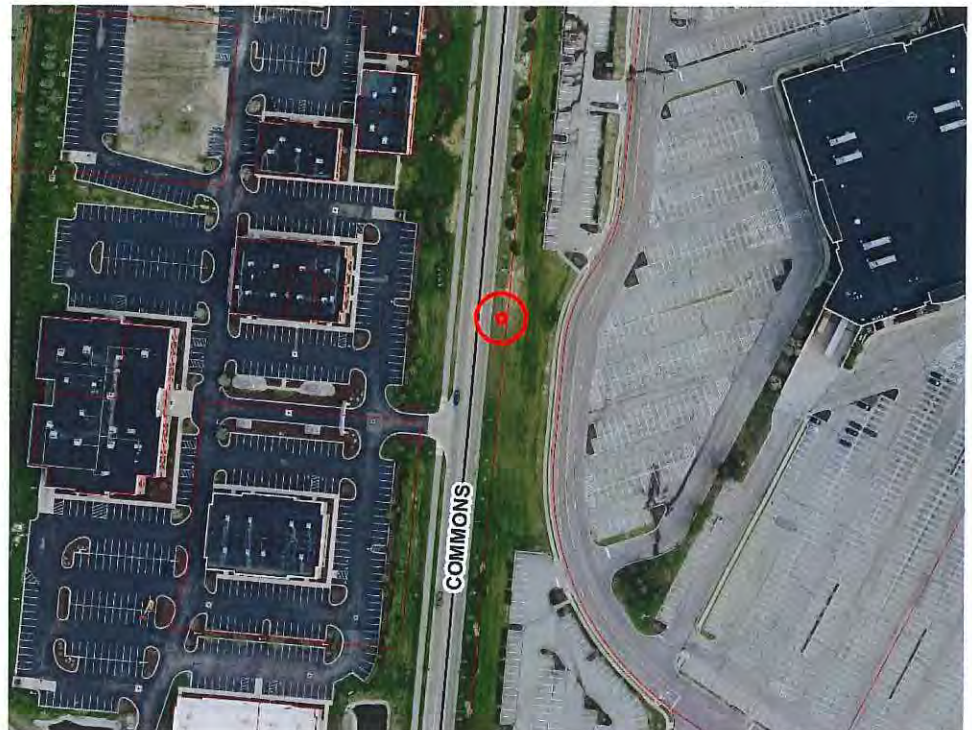
II. **NATURE OF REQUEST:**

The applicant is requesting conditional use approval to construct a new micro cell wireless telecommunications monopole with pole-mounted equipment as required per §158.130 (D)(1) of the City of Beavercreek Zoning Code in the City's right-of-way.

III. **EXISTING CONDITIONS:**

Location

The proposed monopole will be located along the east side of Commons Boulevard, across from 2619 Commons Boulevard, as highlighted on the map to the right.



Zoning



This property does not have a traditional zoning classification. The area under consideration, is in the City's right-of-way. The Zoning Code defines right-of-way as:

***RIGHT-OF-WAY.*** A strip of land dedicated for use as a public roadway or dedicated for public use. In addition to the roadway, a right-of-way normally incorporates the curbs, lawn strips, sidewalks, lighting, drainage facilities and utilities and may include special features (required by the topography or treatment) such as grade separation, landscaped areas, viaducts, and bridges.

#### Surrounding Zoning

The property to the west is PUD MX 97-3, which is a mixed used use PUD, consisting of residential and office uses. To the east is PUD 88-21 a commercial PUD.

#### Existing Land Use

Again, this property is currently the City's right-of-way, on the eastern side of Commons Boulevard pavement.

#### Surrounding Land Use

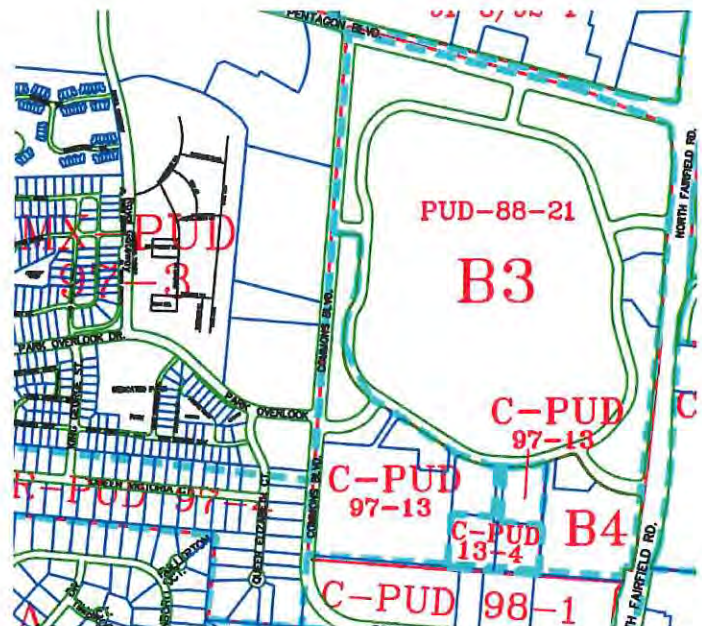
The land to the north and the south is a continuation of city right-of-way. To the west are the professional and medical office suites, The Acropolis. To the east is the Mall at Fairfield Commons.

#### Availability of Utilities

The site is currently served by DP&L. These sites do not need sanitary sewer, water or natural gas in order to operate.

#### Floodplain

No portion of the property under review is located within a federally regulated floodplain or floodway.



#### **IV. ANALYSIS:**

##### Proposed Structure/Site Improvements

The plans show the construction of a 46.66-foot tall, 1.5-foot diameter monopole micro cell tower facility along the east site of Commons Boulevard. All support equipment, such as the GPS unit, electric distribution panel, weather head, the UE (User Equipment, or cell phone user) Relay device, and the antenna itself will all be mounted onto the proposed monopole. There is nothing shown on the plans that indicates that any support equipment will be placed on the ground around the pole. The top of the antenna is shown at 50 feet from grade. In order to better align with the height of the poles along Commons Boulevard (which are 30 feet above grade), staff has added a condition that limits the height of the proposed pole to 40 feet. This will not preclude the omni-directional antenna from extending beyond the height of the pole, but will limit the steel pole height. While the proposed pole, if limited to 40 feet, will still be higher than the 30-foot light poles on Commons Boulevard, the 10-foot higher pole will be less visually intrusive than a 46.66-foot pole. There is a correlation between pole height and performance, as noted on the attached letter from the applicant. A 40-foot limitation represents a good compromise between 30 feet to match the light poles and 46.66 feet from the initial application.

##### Parking

N/A

##### Landscaping/Screening/Setbacks

The pole is proposed to be setback as far away from the pavement as possible, at 11.5 feet from the back of the curb on Commons Boulevard.

##### Visual Impact

The plans call for the pole to be painted to match the existing light poles on Commons Boulevard, which are painted brown.

#### **V. Legal Considerations**

Included in your packet is a letter from Mr. McHugh, the City Attorney. The letter summarizes a state law that limits the City's (and BZA's) ability to place restrictions on applications such as these, and severely limits the ability to disapprove the applications. As such, not all criteria listed in §158.130 (D) and (F) can or will be met with this application. A condition has been added to the proposed resolution that gives relief from said conditions so as to not be in



conflict with state or federal laws. Attached to this staff report is a copy of §158.130 (D) and (F), with parts highlighted that can't be met with applications for micro cell poles. §158.130 (D) and (F) were written with traditional 199-foot cell towers in mind.

**VI. RECOMMENDATION:**

Staff finds that this conditional use proposal satisfies the criteria for approval as established per §158.130 (F), as much as practical and required by state law. Further, staff recommends that the Board of Zoning Appeals adopt the attached resolution approving this conditional use application.

**RESOLUTION  
BOARD OF ZONING APPEALS  
CASE NO. CU 18-1**

WHEREAS, OH Exchange Facilities, LLC has made application for conditional use approval for the construction of a small cell facility and related equipment, to be located within the City's right-of-way, on Commons Boulevard, across from 2619 Commons Boulevard, Beavercreek Ohio 45431.; and

WHEREAS, the applicant is requesting permission to construct a small cell wireless telecommunication tower and related equipment; and

WHEREAS, public hearing was held on January 10, 2018 at which time all persons were given opportunity to comment on the application; and

WHEREAS, the Board of Zoning Appeals finds that \$158,130 has been fully satisfied, as allowed by state and federal laws.

NOW therefore the Board of Zoning Appeals orders that:

1. The conditional use application to allow construction of a small cell wireless telecommunication tower and equipment on Commons Boulevard, across from 2619 Commons Boulevard, Beavercreek Ohio 45431, is hereby approved.
2. Conditions of approval shall be as follows:
  - a. The approved plans for this application shall be those stamped "Received December 6, 2017, except as modified herein.
  - b. The height of the pole shall be limited to 40 feet from adjacent grade.
  - c. The pole shall be painted to match the color of the existing light poles on Commons Boulevard.
  - d. Prior to the installation of the pole and associated equipment, the applicant shall apply for and receive approval of a zoning permit and a right-of-way permit from the Planning and Development Department and the Engineering Department respectively.
  - e. The pole shall not contain any advertisements, and may only display information required by federal and/or state law.

- f. Should the use of the be discontinued (meaning the structure is not properly maintained, has been abandoned, become obsolete, has been unused or has ceased daily activities or operation for a period of 12 months) the applicants or its successors shall be responsible for its removal.
- g. Prior to the construction of the pole, the owners/operators of the pole shall submit and keep on file with the City, proof of liability insurance, and shall indemnify the City of all liability from the construction and operation of the pole within the city's right-of-way.
- h. As required by state and federal laws, the applicant is granted relief from non-applicable and non-practical requirements of §158.130 (D) and (F) of the Zoning Code.

**ACTION BY BOARD OF ZONING APPEALS** \_\_\_\_\_.  
(Date)

\_\_\_\_\_  
Chairman

• **158.130 WIRELESS TELECOMMUNICATION FACILITIES.**

(D) *Regulations for facilities on publicly owned property and/or public rights-of-way.*

(1) Wireless telecommunication facilities may be permitted to be located as a conditional use on a publicly owned property in any zoning district upon approval by the Board of Zoning Appeals, subject to the following requirements and standards:

(a) The applicant shall submit a letter of preliminary agreement, signed by the authorizing official of the public body, stipulating that the public entity has approved, in principle, the location of the facility on its property, along with any pertinent terms and conditions that may effect the location and construction of such facilities.

(b) Whenever possible, the tower shall be concealed among trees to partially shield the facilities from view.

(c) The applicant shall make every effort possible to reduce visual impacts by camouflage, color, and other appropriate measures.

(d) All accessory building and structures shall be aesthetically and architecturally compatible with the surrounding environment and adjacent buildings and structures.

(e) No variance from height limitations is required. However, no tower may exceed 199 feet.

(f) The tower and facilities must be located at least 300 feet from the nearest residential structure or property line unless the facilities and antennae are located inside another structure or the facilities are camouflaged in a manner acceptable to the Board of Zoning Appeals.

(g) All towers shall be designed and constructed to accommodate the antennae of at least two additional providers.

(h) All wireless telecommunication towers shall be designed and constructed as monopole structures unless otherwise allowed by the Board of Zoning Appeals for aesthetic or technical reasons.

(i) No application for approval of a wireless telecommunication tower shall be approved unless and until the applicant has met the ■Standards for Approval of Antennae, Towers and Sites●, contained in division (F) below.

(F) *Standards for approval of antennae, towers, and sites.* The following standards shall apply to all wireless telecommunication antennae and towers.

(1) *Network plan.* The applicant shall be required to submit, along with all other required



information, a map drawn to scale showing the wireless telecommunications provider's existing, approved and proposed facility sites within the corporate limits of Beavercreek and within 2,500 feet of the city boundaries.

(2) *Necessity of location.* The applicant shall be required to demonstrate, using the latest technological evidence, that the antenna and/or tower must be placed as proposed in order to satisfy a necessary function in the company's grid system.

(3) *Effort to co-locate.* Whenever feasible, the use of an existing, approved, or proposed tower, owned either by the applicant or another entity, shall be utilized. The applicant shall demonstrate by clear and convincing evidence that its antenna cannot be located on any other telecommunication tower or tall structure in the vicinity and that it has undertaken all reasonable means to avoid any undue negative impact caused by multiple towers within an area. The applicant must demonstrate that it has contacted the owners of nearby telecommunication towers or tall structures, requested permission to install its antenna on those structures, and was denied permission. The city may deny the application to construct a new tower if the applicant has not made a good faith effort to mount the antenna on existing structures.

(4) *Accommodation of city needs.* The applicant shall agree to make every reasonable effort to accommodate the telecommunication antennae of the local police, fire and other public agencies.

(5) *Agreement to shared use.* In the event of the construction of new facilities by the applicant, the applicant shall agree to the shared use of the tower and support structures by other cellular telecommunication companies where technologically feasible upon payment of reasonable fees, provided such shared use does not violate any state or federal law. Applicants are required to bear an equitable share of capital operating and other expenses in connection with such shared use.

(6) *Wireless telecommunication antenna and/or tower safety.* The applicant shall demonstrate that the proposed wireless telecommunication antenna and/or tower is safe and that the surrounding properties will not be negatively affected by tower failure, falling ice or other debris and must meet all Federal Communications Commission standards.

(7) *Color and appearance standards.* All wireless telecommunication facilities shall be designed or painted to portray a non-contrasting gray or similar color minimizing its visibility, unless otherwise required by the Federal Communications Commission or Federal Aviation Administration. All appurtenances shall be aesthetically and architecturally compatible with the surrounding environment by the means of camouflage deemed acceptable by the city.

(8) *Landscaping.* Landscaping shall be required in order to screen the support structure and any other ground level features. In general, landscaping should soften the appearance of the wireless telecommunication site. Existing vegetation on and around the site shall be preserved to the greatest extent possible. The city may permit a combination of existing vegetation, topography, walls, decorative fences or other features instead of landscaping, if they achieve the same degree of screening as the required landscaping.



(9) *Licensing.* The applicant must demonstrate to the city that it is licensed by the Federal Communications Commission.

(10) *Required parking.* If the wireless telecommunication site is fully automated, adequate parking shall be required for maintenance workers. If the site is not fully automated, the number of required parking spaces shall equal the number of employees working on the largest shift. All parking specifications and requirements shall be consistent with the applicable parking requirements as established in the Zoning Code.

(11) *Lighting/signage prohibited.* Unless required by the Federal Aviation Administration, no artificial lighting shall be permitted on any wireless telecommunication towers, antennae, equipment or structures. No wireless telecommunication tower or antenna shall contain any signage containing a commercial, political or personal message.

(12) *Other.* Wireless telecommunication towers and antennae shall meet all Federal Aviation Administration regulations.

(13) *Identification.* Each facility shall be clearly identified by a two square foot sign listing the owner of the facility with service and emergency phone numbers.

(14) *Photo simulations required.* Photo simulations of the proposed wireless telecommunication facility from affected residential properties and public rights-of-way taken at designated locations shall be provided.

(15) *Fencing required.* Unless approved otherwise, the applicant shall be required to install a minimum six-foot fence around the base and enclosing all wireless telecommunication towers, antennae, equipment and/or structures.





# COOLIDGE WALL

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Jonas J. Gruenberg  
Merle F. Wilberding  
J. Stephen Herbert  
R. Scott Blackburn  
Richard A. Schwartz  
Sam Warwar  
Terence L. Fague  
Richard A. Talda  
R. Brent Gambill  
David C. Korte  
Stephen M. McHugh  
Kristin A. Finch  
David P. Pierce  
Shannon L. Costello  
Christopher R. Conard  
Marc L. Fleischauer  
Michelle D. Bach  
Gregory M. Ewers  
Daniel J. Gentry  
Chad D. Hansen  
Patricia J. Friesinger  
Joshua R. Lounsbury  
Michael G. Leesman  
Lu Ann Stanley  
Douglas M. Ventura  
R. Michael Osborn  
Amy N. Blankenship  
Javan A. Kline  
Eddie E. Crump  
W. Chip Herin III  
Jennifer R. Grewe  
Patrick Martin  
Robert D. Ballinger

Glenn L. Bower  
C. Mark Kingseed  
William H. Seall  
*Of Counsel*

J. Bradford Coolidge  
1886-1965

Hugh E. Wall, Jr.  
1912-2001

Ronald S. Pretekin  
1942-2011

Suite 200  
33 West First Street  
Dayton, Ohio 45402-1289  
937-223-8177  
Fax: 937-223-6705  
www.coollaw.com

Direct Dial Number  
937-449-5544

E-mail Address:  
mchugh@coollaw.com

January 4, 2018

City of Beavercreek  
Board of Zoning Appeals  
1368 Research Park Drive  
Beavercreek, OH 45342

**Re: OH Exchange Facilities Networks, LLC's Conditional Use Permit Application,  
Case Number CU-18-1**

Dear BZA Members:

Planning Staff has asked me to provide an analysis of the state of Ohio law as it applies to the above-referenced application.

SB 331, which went into effect March 21, 2017, included provisions in the bill which amended Chapter 4939 of the Ohio Revised Code to address how municipalities must deal with requests for consent from micro wireless facilities to place wireless communications towers, antenna, and other wireless communications equipment in the public right-of-way. Accordingly, where micro wireless facilities are concerned, R.C. §4939.031 currently provides that (1) a municipal corporation must act on applications for consent to place wireless telecommunications facilities in a public right-of-way within ninety (90) days of the application; and (2) "a municipal corporation shall not require any zoning or other approval, consent, permit, certificate, or condition for the construction, replacement, location, attachment, or operation of a micro wireless facility, or otherwise prohibit or restrain the activities in this section."<sup>1</sup>

R.C. 4939.033 specifically provides that "[a] request for consent under section 4939.031 of the Revised Code shall be deemed a permitted use and shall be exempt from local zoning review." Further, R.C. 4939.0315 specifically prohibits a municipal corporation from imposing various restrictions upon a requestor making an application to operate a wireless telecommunications facility in a public right-of-way.

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<sup>1</sup> Pursuant to R.C. 4939.01(F), a "micro wireless facility" includes both a distributed antenna system (DAS) and a small cell facility, and the related wireless facilities." Both DAS and small cell facilities must conform to the size limitations set forth in R.C. 4939.01(N).

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City of Beavercreek

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A number of the restrictions upon a municipality that are expressly prohibited under R.C. 4939.0315 are currently requirements a requestor must comply with pursuant to §158.131(F) of the Beavercreek Zoning Code ("BZC"). Thus, if the BZA intends to require requestors of consent for micro wireless facilities to comply with the requirements of §158.130 of the BZC, it will be doing so in direct contravention of Ohio law and will put the City at risk of being sued by any requestor of a micro wireless facility who is denied consent to place/operate a wireless telecommunications facility in the public right-of-way.

Many municipalities, including the City of Beavercreek, have taken the position that SB 331 wrongfully usurps municipal home rule authority and is inconsistent with Section 704 of The Telecommunications Act of 1996, which is federal law that specifically provides that local governments have the authority to make decisions regarding the placement, construction, and modification of personal wireless facilities. Accordingly, fifty (50) municipalities across Ohio joined in a lawsuit filed on March 20, 2017, in Franklin County, Ohio (i.e., *City of Bexley, Ohio, et al. v. The State of Ohio, et al.*) in which these municipalities challenged the constitutionality of the portions of SB 331 that address wireless telecommunications facilities.

By decision dated June 2, 2017, Judge Richard A. Frye declared various portions of SB 331, which included the portions dealing with wireless telecommunications facilities, as unconstitutional for violating Article II, Section 15 of the Ohio Constitution which provides that "[n]o bill shall contain more than one subject, which shall be clearly expressed in its title." Judge Frye concluded that since SB 331, which was initially intended to regulate the sale of dogs from pet stores/retailers, was revised to include and address a number of other various matters, it violated the one-subject rule of the Ohio Constitution. As such, Chapter 4939 of the Revised Code that was enacted March 21, 2017, has been deemed (at least in Franklin County) unconstitutional and no longer in effect. As expected, the State of Ohio has appealed this decision and the matter is currently pending before the Tenth District Court of Appeals.

Based on the foregoing, and since the Franklin County trial court judge's ruling is not binding in Greene County, it is my recommendation that when considering the application made by OH Exchange Facilities Network, LLC for a conditional use permit, you strongly consider that R.C. Chapter 4939 has not been declared unconstitutional in our jurisdiction. As such, the City will be open to potentially costly litigation if it denies any application for micro wireless facilities in contravention of R.C. Chapter 4939.

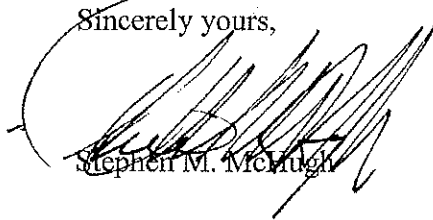
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City of Beavercreek  
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If you have questions or require additional information, please let me know.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Stephen M. McHugh", is written over a circular stamp. The signature is fluid and cursive.

SMM/aw

## **Ohio Senate Bill 331 Overview**

Passed 12/7/16

Signed by Governor 12/19/16

- The bill amended Ohio law to promote the distribution of small cells. The bill significantly limited the City's control over wireless deployment in public rights of way.
- "Micro Wireless Facilities" are defined as structures where the antennae are not greater than 6 cubic feet in volume, the associated equipment not more than 28 cubic feet in volume, and they do not increase the height of the supporting structure more than 10 feet.
- "Wireless Support Structure," is any pole, including monopoles, light pole, traffic signal, sign pole, or utility pole that is capable of supporting the wireless facility.
- In 4939.031, the Bill provides that, other than set as forth in the new provisions, municipalities cannot require any zoning or other approval, consent, permit, or certificate, or otherwise "prohibit or restrain" the activities in areas that are not public rights-of-way...meaning any private property, commercial or residential.
- Application fees for a permit to install Micro Wireless Facilities in the public rights-of-way are limited to the lesser of \$250 or the amount charged for a building permit for any other type of commercial or land use development. We currently charge \$150 for a new wireless communication tower.
- The Bill prohibits 17 specific actions by local governments. Among things under the Bill, a local government cannot:
  - Prohibit location in residential areas or within a specific distance from a residence;
  - Require the applicant to submit information or otherwise consider "need" for the facility, customer demand, or quality of service;
  - Evaluate the request based on availability of other potential locations (however the city can propose an alternate location within 50 feet, which must be used if the applicant has authority and there are not technical limits or additional costs);
  - Require removal of existing wireless support structures or facilities;
  - Require bonds, escrow deposits, or letters of credit, unless also imposed generally on right-of-way occupants;
  - Impose unreasonable requirements regarding appearance; or screening.

- Require the use of municipally-owned facilities or property;
  - Require the applicant to agree to allow co-location;
  - Limit the duration of permits;
  - Impose setbacks or fall zone requirements that are different from requirements, if any, imposed on other structures in the public rights-of-way; currently, if the road has a curb, light/signal poles have to be 2 feet off the edge of the curb, so a micro cell tower will have the same setbacks. If not curbed it's a little farther.
  - Impose separation requirements between wireless facilities
- The Bill requires municipalities to allow attachment of Micro Wireless Facilities to municipal support structures in the public rights-of-way, such as all of our intersection signals and any municipal street light pole. It also limits the fees the City can charge for attachment to one of our structures to the lesser of actual, direct, and reasonable costs or \$200.
  - If the pole in the public right of way is owned by another party (such as a DPL or ATT), the City can't give consent or denial to an entity wishing to install a micro wireless facility, only the pole owner can.
  - Consent shall not be required for routine maintenance or replacement of wireless facilities with facilities that are "substantially similar" to the existing facilities or "the same size or smaller" than the existing wireless facilities.



OH Exchange Facilities Networks, LLC  
120 South Riverside Plaza, Suite 1800  
Chicago, IL 60606

December 5, 2017

Randall F. Burkett  
City Planner  
City of Beavercreek  
1368 Research Park Dr.  
Beavercreek, OH 45432

RE: OH Exchange Facilities Networks, LLC's Permit Application Submission

Dear Mr. Burkett:

This letter intends to serve as OH Exchange Facilities Networks, LLC's "letter of intent" in regards to its utility infrastructure in the public rights-of-way of the City of Beavercreek, OH ("City").

OH Exchange Facilities Networks' transport network utilizes both new poles and attachments to serve the communities' insatiable demand for wireless service. Our design optimizes the performance of wireless networks by taking into consideration customer usage behaviors, terrain, obstructions, points-of-interest, and local guidance and ordinances.

New poles offer wireless service and communications providers the ability to optimize antenna placement in serving that demand. Targeting customer usage can be such a precise exercise that the required location is a matter of less than thirty (30) feet. If existing infrastructure is not available, new poles are needed.

Similarly, pole height is critical in achieving network performance. Higher antennas are free of clutter such as tree canopy, buildings, and other manmade obstructions. The signal emanating from them isn't diluted by this clutter layer and delivers a better wireless experience.

Taller antennas also push wireless signals further, which in turn means fewer sites are required. That allows the provider to have less impact on the community and drive sustained investment in network densification in the community.

OH Exchange Facilities Networks strives to work cooperatively with jurisdictions to deploy its transport network. By using both new and existing poles, OH Exchange Facilities Networks' transport network aims to deliver the most robust network on the least infrastructure. This approach builds a better and more efficient data network, which in turn benefits your constituents by enabling affordable, high-quality wireless services.

OH Exchange Facilities Networks looks forward to working with the City. Should you have any questions, please do not hesitate to contact at (513) 954-6684, or via email at [JBear@mobilitie.com](mailto:JBear@mobilitie.com). Or you may contact our Permitting Specialist for this area, Kalpana Sabapathy, at (312) 638-5342, or via email at [Kalpana.Sabapathy@mobilitie.com](mailto:Kalpana.Sabapathy@mobilitie.com).

Respectfully submitted,



John Bear

Permitting Manager

RECEIVED

DEC 06 2017

CITY OF BEAVERCREEK  
PLANNING DEPARTMENT



SITE ID-CANDIDATE LETTER/CASCADE ID-CANDIDATE LETTER:

9OHB002710/CI90XS842A

LATITUDE/LONGITUDE:

39.766820/-84.059640

CROSS STREET:

COMMONS BLVD.

CITY, STATE, ZIP:

BEAVERCREEK, OH 45430



IF YOU DIG IN ANY STATE  
DIAL 811 FOR THE LOCAL  
"ONE CALL CENTER" -  
IT'S THE LAW

THE UTILITIES SHOWN HEREIN ARE FOR THE CONTRACTORS  
CONVENIENCE ONLY. THERE MAY BE OTHER UTILITIES NOT  
SHOWN ON THESE PLANS. THE ENGINEER/SURVEYOR ASSUMES  
NO RESPONSIBILITY FOR THE LOCATIONS SHOWN AND IT SHALL  
BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL THE  
UTILITIES WITHIN THE LIMITS OF THE WORK. ALL DAMAGE MADE  
TO THE (E) UTILITIES BY THE CONTRACTOR SHALL BE THE  
SOLE RESPONSIBILITY OF THE CONTRACTOR.

GENERAL NOTES

THE FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION. A  
TECHNICIAN WILL VISIT THE SITE AS REQUIRED FOR ROUTINE  
MAINTENANCE. THE PROJECT WILL NOT RESULT IN ANY SIGNIFICANT  
DISTURBANCE OF EFFECT ON DRAINAGE; NO SANITARY SEWER  
SERVICE, POTABLE WATER OR TRASH DISPOSAL IS REQUIRED AND  
NO COMMERCIAL SIGNAGE IS PROPOSED.

SITE INFORMATION

SITE ID:	9OHB002710
CASCADE ID:	CI90XS842A
LATITUDE:	39.766820
LONGITUDE:	-84.059640
CROSS STREET:	COMMONS BLVD.
CITY, STATE, ZIP:	BEAVERCREEK, OH 45430
COUNTY:	GREENE
JURISDICTION:	CITY OF BEAVERCREEK
PROPERTY OWNER:	PUBLIC RIGHT-OF-WAY
APPLICANT:	MOBILITIE, LLC 120 S RIVERSIDE PLAZA; SUITE 1800 CHICAGO, IL 60606 PHONE: (312) 638-5400

ENGINEER

A&E  
CESO, INC.  
395 SPRINGSIDE DRIVE, SUITE 202 ATTN:  
AKRON, OHIO 44333 P:330.665.0660  
NATIONAL SMALL CELL V4.5 20170711

DO NOT SCALE DRAWINGS

CONTRACTORS SHALL VERIFY ALL PLANS, (E) DIMENSIONS & FIELD  
CONDITIONS ON THE JOB SITE & SHALL IMMEDIATELY NOTIFY THE  
ARCHITECT/ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE  
PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

LOCATION MAPS

VICINITY MAP



REGIONAL MAP



PROJECT DESCRIPTION

END USER PROPOSES TO INSTALL EQUIPMENT ON A NEW  
STEEL POLE WITHIN AN EXISTING RIGHT-OF-WAY.  
THE SCOPE WILL CONSIST OF THE FOLLOWING:

- INSTALL A NEW STEEL UTILITY POLE WITH PROPOSED  
BACKHAUL TRANSPORT EQUIPMENT

CODES

INTERNATIONAL BUILDING CODE  
NATIONAL ELECTRICAL SAFETY CODE  
TIA/EIA-222-G-2 OR LATEST EDITION  
LOCAL BUILDING/PLANNING CODE

DRAWING INDEX

SHEET NO:	SHEET TITLE
T-1	TITLE SHEET
SP-1	EXHIBIT PHOTO & SITE PLAN
ES-1	EROSION CONTROL PLAN
EV-1	POLE ELEVATIONS
PL-1	PLUMBING & RISER DIAGRAM
EQ-1	EQUIPMENT DETAILS
EQ-2	EQUIPMENT DETAILS
EX-1	EXCAVATION DETAILS
E-1	ELECTRICAL DETAILS
G-1	GROUNDING DETAILS
S-1	POLE FOUNDATION DETAILS(N) steel
TC-1	VEHICULAR TRAFFIC CONTROL PLAN
TC-2	PEDESTRIAN SAFETY PLAN
GN-1	GENERAL NOTES
GN-2	GENERAL NOTES
GN-3	GENERAL NOTES

**mobilitie**

120 S. RIVERSIDE PLAZA, SUITE 1800  
CHICAGO, IL 60606

OHIO EXCHANGE  
FACILITIES  
NETWORKS, LLC

PROJECT NO: ER600221  
DRAWN BY: JDM  
CHECKED BY: MRB

C	12.04.17	JX REVISION
B	10.12.17	COMMENT REVISION
A	09.28.17	FOR REVIEW

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WWW.CESOGROUP.COM

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ENGINEER, TO ALTER THIS DOCUMENT

9OHB002710  
CI90XS842A  
COMMONS BLVD.  
BEAVERCREEK, OH 45430  
PROPOSED STEEL UTILITY POLE

SHEET TITLE

TITLE SHEET

SHEET NUMBER

T-1





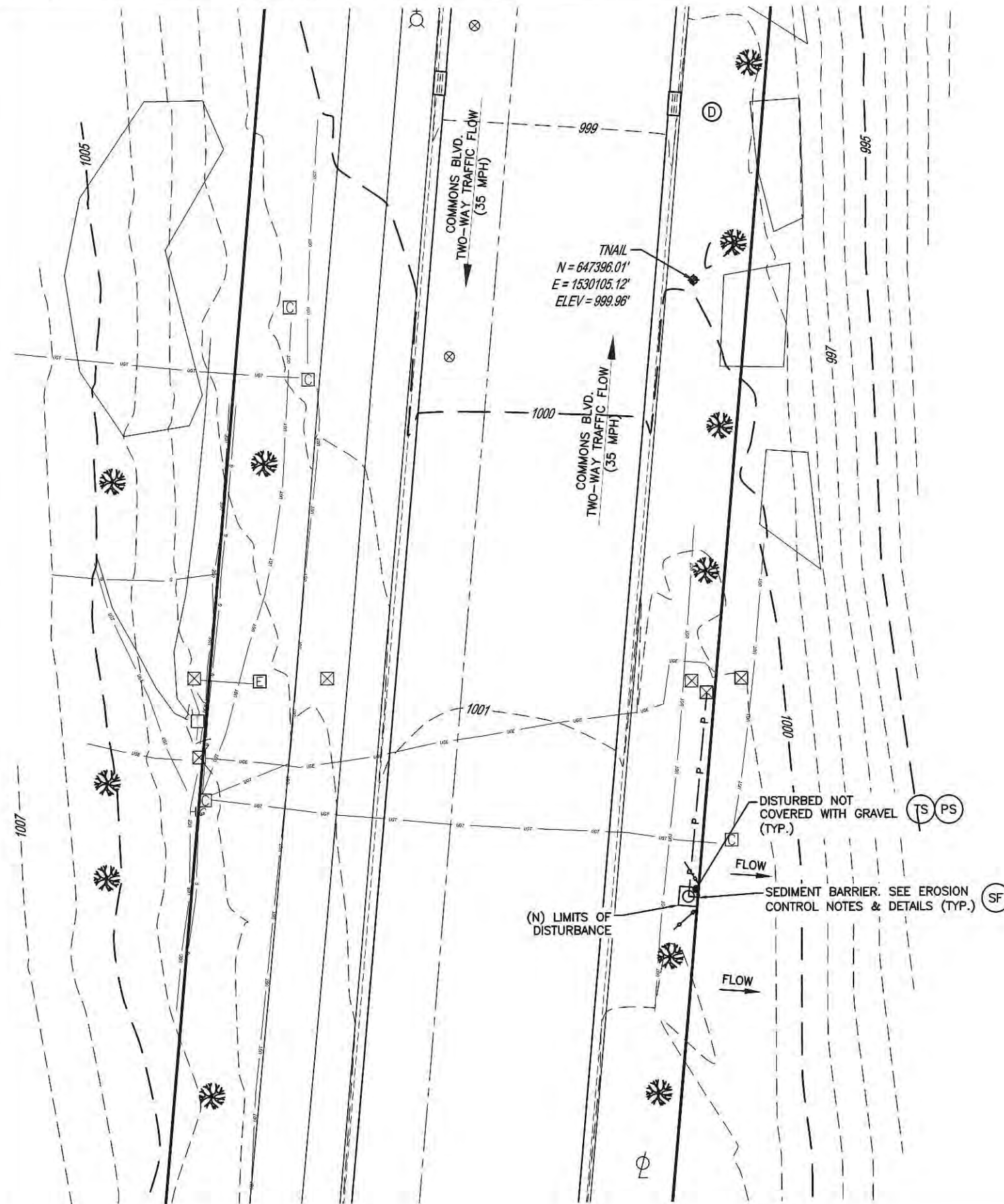
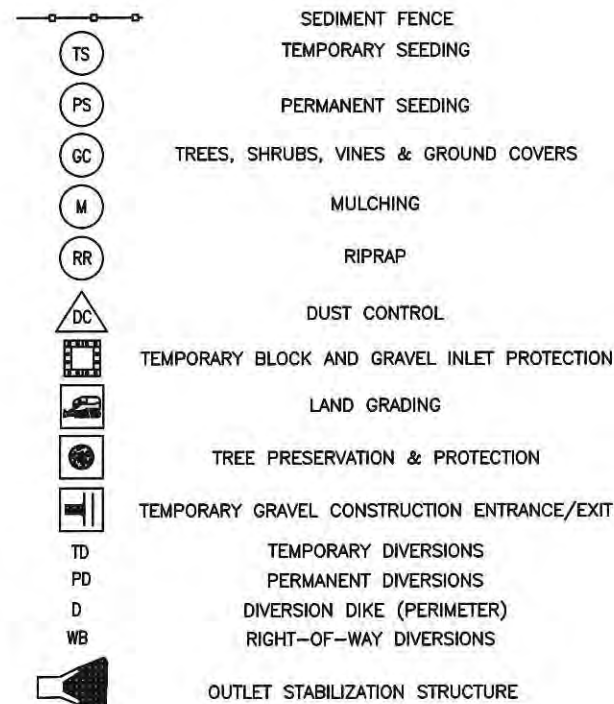


GRADING NOTES:

1. THIS PLAN WAS PREPARED FOR THE EXCLUSIVE USE OF MOBILITIE, LLC, AND EXCLUSIVELY FOR THE TRANSFERAL OF THE LEASEHOLD AND THE RIGHT OF EASEMENT SHOWN HEREON AND SHALL NOT BE USED AS AN EXHIBIT OR EVIDENCE IN THE TRANSFERAL OF THE SUBJECT PROPERTY NOR ANY PORTION OR PORTIONS THEREOF.
2. THE CONTOURS SHOWN ON THIS PLAT ARE BASED ON USGS DATUM AND HAVE A VERTICAL ACCURACY OF  $\pm 2'$ . CONTOURS OUTSIDE THE IMMEDIATE SITE AREA ARE APPROXIMATE.
3. THE UTILITIES SHOWN HEREIN ARE BASED UPON AN ABOVE-GROUND FIELD SURVEY. THE ACTUAL UTILITY LOCATIONS SHOULD BE FIELD VERIFIED BY THE CONTRACTOR BEFORE ANY CONSTRUCTION BEGINS.
4. THERE ARE NO WETLANDS WITHIN THE PROPOSED LIMITS OF CONSTRUCTION FOR THIS PROJECT.
5. THE CONTRACTOR SHALL REMOVE ANY ROCK AND/OR UNSUITABLE MATERIAL TO A DEPTH OF TWO (2) FEET BELOW THE FINISHED GRADE OR AS DIRECTED BY THE SOILS ENGINEER OR THE DEVELOPER.
6. EARTHWORK IN PERMANENT STRUCTURE AREAS SHALL BE COMPACTED TO A MINIMUM OF 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY (ASTM D-698) OR AS DIRECTED BY THE SOILS ENGINEER.

EROSION CONTROL NOTES:

1. EROSION CONTROL DEVICES SHALL BE INSTALLED, INSPECTED, AND FULLY OPERATIONAL PRIOR TO CLEARING AND SHALL BE MAINTAINED DAILY THROUGHOUT CONSTRUCTION AND UNTIL PERMANENT GROUND COVER IS ESTABLISHED.
2. ALL EROSION CONTROL MEASURES SHALL CONFORM TO LOCAL, STATE AND COUNTY STANDARDS.
3. EROSION CONTROL MEASURES INDICATED ON THESE PLANS MEET THE MINIMUM REQUIREMENTS. ADDITIONAL REQUIREMENTS MAY BE NECESSARY AS DETERMINED BY FIELD CONDITIONS OR BY THE INSPECTOR. CHANGES AND REINFORCEMENT MAY BE REQUIRED WHEN FAILURE OF THE EROSION CONTROL MEASURES PERSISTS.
4. CONTRACTOR SHALL PROVIDE DUST CONTROL AND SHALL PROTECT ADJACENT STREETS FROM ACCUMULATION OF SOIL.
5. CONTRACTOR IS RESPONSIBLE FOR MONITORING DOWNSTREAM CONDITIONS THROUGHOUT THE CONSTRUCTION PERIOD AND CLEARING ANY DEBRIS AND/OR SEDIMENT CAUSED BY CONSTRUCTION.
6. CONTRACTOR SHALL MAINTAIN ALL EROSION CONTROL MEASURES AT ALL TIMES. CONTRACTOR SHALL INSPECT AND REPAIR ALL EROSION CONTROL MEASURES AT THE END OF EACH DAY AND AFTER EACH RAIN EVENT.
7. CONTRACTOR SHALL CLEAN OUT ALL EROSION CONTROL MEASURES BEFORE THEY ARE TWO-THIRDS FULL OR AS SPECIFIED BY THE INSPECTOR OR ENGINEER.
8. CONTRACTOR IS RESPONSIBLE FOR REMOVING ANY DIRT OR MUD FROM THE TIRES OF ANY CONSTRUCTION VEHICLES PRIOR TO THEIR LEAVING THE SITE.



THE CONTRACTOR SHALL VISIT THE SITE BEFORE BIDDING ON THE WORK CONTAINED WITHIN THIS DESIGN PACKAGE. DISCREPANCIES AND OMISSIONS SHALL BE BROUGHT TO THE ENGINEER'S ATTENTION PRIOR TO BIDDING.

EROSION CONTROL PLAN

SCALE: 1" = 20'-0" (1" = 10'-0" ON 24"x36" SHEET)

1

mobilitie

120 S. RIVERSIDE PLAZA, SUITE 1800  
CHICAGO, IL 60606

OHIO EXCHANGE  
FACILITIES  
NETWORKS, LLC

PROJECT NO: ER600221

DRAWN BY: JDM

CHECKED BY: MRB

C	12.04.17	JX REVISION
B	10.12.17	COMMENT REVISION
A	09.28.17	FOR REVIEW

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90HB002710  
C190XS842A  
COMMONS BLVD.  
BEAVERCREEK, OH 45430  
PROPOSED STEEL UTILITY POLE

SHEET TITLE  
EROSION CONTROL PLAN

SHEET NUMBER  
ES-1



NOTE:  
STEEL POLE TO BE PAINTED TO MATCH  
EXISTING LIGHT POLES IN THE AREA.

T/ OF (N) ANTENNA =  $\pm 50'-0"$   
CL OF (N) ANTENNA =  $\pm 48'-9"$   
B/ OF (N) ANTENNA =  $\pm 47'-6"$   
T/ OF (N) POLE =  $\pm 46'-8"$

CL OF (N) UE RELAY =  $\pm 17'-6"$   
B/ OF (N) UE RELAY =  $\pm 17'-0"$

CL OF (N) RADIO HEAD =  $\pm 15'-0"$

CL OF (N) AC DISTRIBUTION BOX =  $\pm 11'-0"$

CL OF (N) DISCONNECT =  $\pm 7'-0"$

CL OF (N) METER =  $\pm 5'-0"$

### SIDE VIEW

(N) POLE FOUNDATION  
CONTRACTOR TO BACKFILL  
PER REQUIREMENTS (SEE  
NOTE 2, FOUNDATIONS,  
GN-3)

(N) OMNI-DIRECTIONAL  
ANTENNA TO BE INSTALLED

(N) WEATHER HEAD FOR  
NEW OVERHEAD UTILITY

(N) STEEL POLE

(1) (N) 2" RIGID GALVANIZED  
STEEL CONDUIT FOR POWER

(N) UE RELAY ATTACHED  
WITH 1/2" STEEL BANDING

(N) GPS UNIT  
MOUNTED TO RADIO

(N) RADIO ATTACHED  
WITH 1/2" STEEL  
BANDING

(N) AC POWER DISTRIBUTION  
ATTACHED WITH 1/2" STEEL BANDING

(N) DISCONNECT ATTACHED  
WITH 1/2" STEEL BANDING

(N) 100A METER ATTACHED  
WITH 1/2" STEEL BANDING

(1) (N) 2" RIGID GALVANIZED STEEL CONDUIT  
ABOVE GRADE FOR POWER

(1) (N) 2" CONDUIT SCHED 40 PVC  
BELOW GRADE FOR POWER TO BE  
INSTALLED BY POWER COMPANY

### NOTES:

1. ALL HARDWARE SHALL BE STAINLESS STEEL.
2. ALL CABLES SHALL BE SECURED TO POLE EVERY 36" OR LESS.
3. LIGHTNING RODS SHALL BE INCLUDED AS REQUIRED.

T/ OF (N) ANTENNA =  $\pm 50'-0"$

CL OF (N) ANTENNA =  $\pm 48'-9"$

B/ OF (N) ANTENNA =  $\pm 47'-6"$

T/ OF (N) POLE =  $\pm 46'-8"$

CL OF (N) UE RELAY =  $\pm 17'-6"$

B/ OF (N) UE RELAY =  $\pm 17'-0"$

CL OF (N) RADIO HEAD =  $\pm 15'-0"$

CL OF (N) AC DISTRIBUTION BOX =  $\pm 11'-0"$

CL OF (N) DISCONNECT =  $\pm 7'-0"$

CL OF (N) METER =  $\pm 5'-0"$

### BACK VIEW

(N) POLE FOUNDATION

## (N) POLE ELEVATIONS

SCALE: 1" = 5'

**mobilitie**

120 S. RIVERSIDE PLAZA, SUITE 1800  
CHICAGO, IL 60606

## OHIO EXCHANGE FACILITIES NETWORKS, LLC

PROJECT NO: ER600221

DRAWN BY: JDM

CHECKED BY: MRB

C	12.04.17	JK REVISION
B	10.12.17	COMMENT REVISION
A	09.28.17	FOR REVIEW



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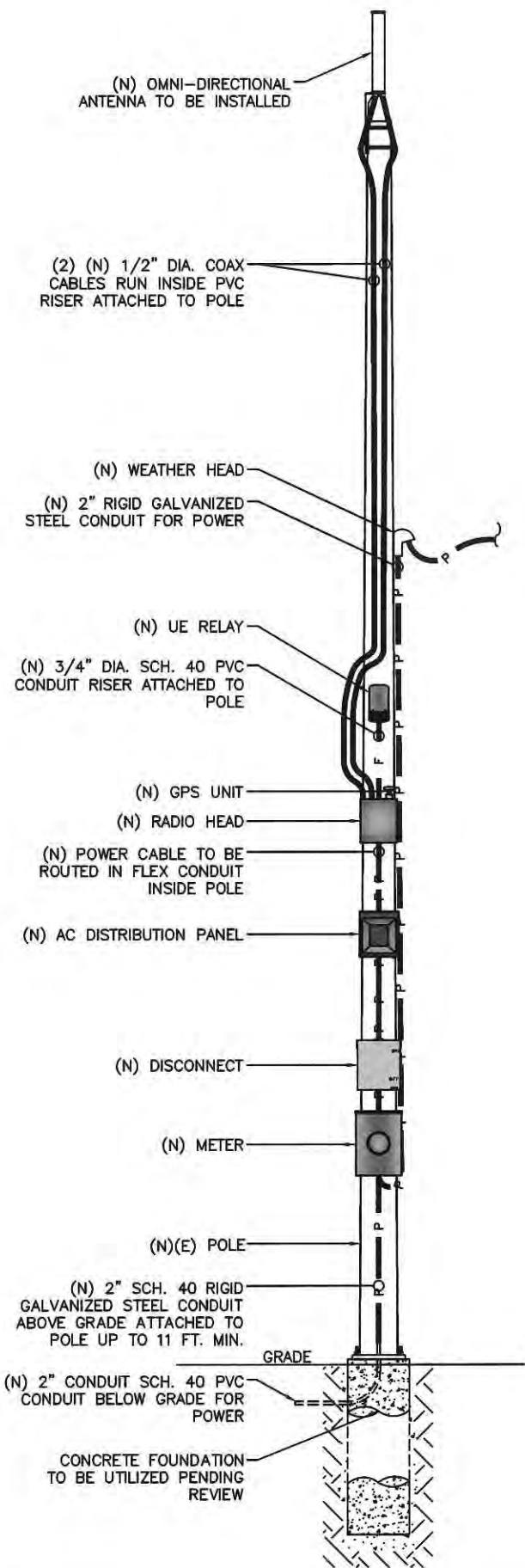
90HB002710  
CI90XS842A  
COMMONS BLVD.  
BEAVERCREEK, OH 45430  
PROPOSED STEEL UTILITY POLE

SHEET TITLE  
**POLE ELEVATIONS**

SHEET NUMBER  
**EV-1**



NOTE:  
(E) POLE MOUNTED EQUIPMENT  
NOT SHOWN FOR CLARITY.



NOTE:  
CABLING DIAGRAM IS FOR CLARITY OF  
CABLE ROUTE AND TERMINATION ONLY.  
CONTRACTOR SHALL INSTALL CABLES  
WITH MINIMAL VISUAL IMPACT ON (N)  
STEEL POLE. SEE ELEVATION DRAWING  
FOR EQUIPMENT AND ANTENNA  
LOCATIONS.

CABLING NOTES:

- A) WOOD, CONCRETE AND EXISTING METALLIC POLES
- I) FROM GRADE LINE TO 11'-0" ABOVE GRADE, ALL CABLES/CONDUCTORS EXCEPT GROUNDING CONDUCTOR MUST RUN IN RIGID GALVANIZED STEEL CONDUIT (RGS)
- II) GROUNDING CONDUCTORS IN EXPOSED LOCATIONS MUST BE INSTALLED IN PVC.
- III) IN EARTH INSTALL PVC CONDUIT FOR BACKHAUL AND ELECTRICAL SERVICE. TRANSITION TO RGS AT GRADE LINE.
- IV) ABOVE 11'-0" ALL CABLES (POWER, ETHERNET, COAXIAL) MUST RUN IN PVC UTILITY POLE RISER.
- (1) AT MAJOR EQUIPMENT, EXTEND UTILITY DUCT IMMEDIATELY ADJACENT TO THE EQUIPMENT. INSTALL CABLES IN THE UTILITY POLE RISER CREATING CABLE DRIP LOOPS NOT LESS THAN THE CABLE BENDING RADIUS.
- (2) INSIDE THE UTILITY POLE RISER, UTILIZE 1/2" COAX BLOCKS WITH LAG SCREWS TO SUPPORT COAX, RADIO AND MW POWER, RF COAX, AND ETHERNET CABLES TO WITHIN 12" OF THE EQUIPMENT BEING SERVED AND ON INTERVALS NOT TO EXCEED 4'.
- V) FOR UNDERGROUND HFC/PUBLIC BACKHAUL, ROUTE ETHERNET CABLE IN CONDUIT UP THE POLE AND ENTER THE UTILITY POLE RISER. SEAL EXPOSED END OF CONDUIT WITH A CABLE TERMINATION FITTING.
- VI) BY APPROVAL IN SELECT CASES LIQUID-TIGHT FLEXIBLE METALLIC CONDUIT (LFMC) MAY BE USED IN LENGTHS NOT TO EXCEED 36" TO EXTEND THE ELECTRICAL SERVICE CONDUIT TO THE AC DISTRIBUTION BOX. EXAMPLE: UTILITY-REQUIRED DISCONNECT ON POLE W/ AC DISTRIBUTION BOX ON OPPOSITE SIDE OF POLE. NOT REQUIRED FOR COAX.
- B) NEW METALLIC POLES
- I) PROCURE NEW POLES WITH SUITABLE HAND HOLES SUCH THAT HAND HOLES EXIST AT ALL EQUIPMENT LOCATIONS.
- II) WHERE REQUIRED, INSTALL POLE BASE SUCH THAT THE ELECTRICAL FEED AND BACKHAUL (IF UNDERGROUND) CIRCUIT ENTER THE POLE THROUGH THE POLE BASE.

PLUMBING DIAGRAM

SCALE: NOT TO SCALE

1

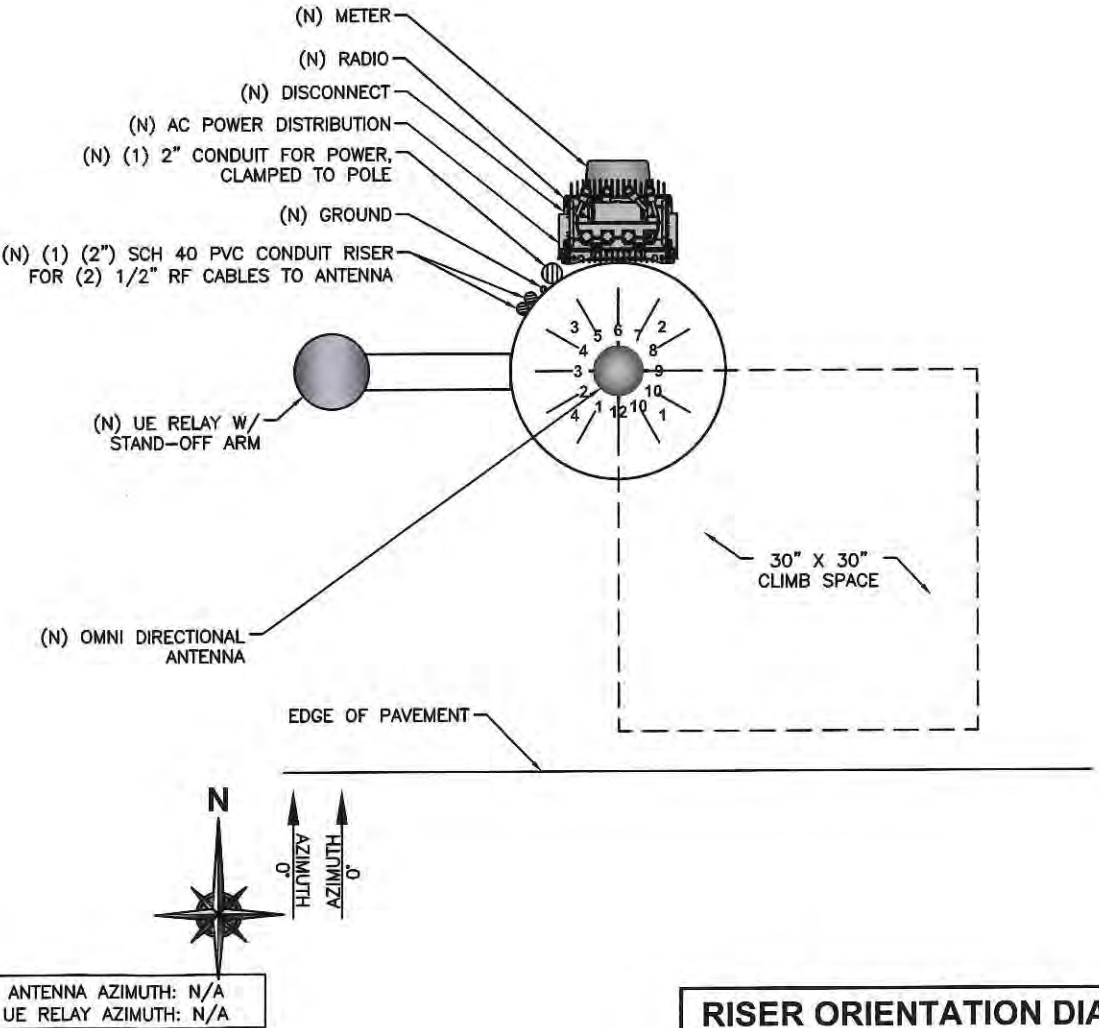
BILL OF MATERIALS							
QTY.	DESCRIPTION	MANUFACTURER	MODEL NUMBER	AZIMUTH	CABLE	DIMENSIONS (HxWxD)	WEIGHT
1	ANTENNA	ALPHA WIRELESS	AW3477-S	TBD	34'±	30.7" X 4.7" DIAMETER	7 LBS
1	UE RELAY	AIRSPAN	IR460-SPB-ST-1-P-0	TBD	3'±	13" X 7" DIAMETER	8.8 LBS
-	-	-	-	-	-	-	-
1	GPS	TALLYSMAN	TW3012	-	-	0.8" X 2.6" DIAMETER	0.3 LBS
1	RADIO	AIRSPAN	AH4000	-	3'±	20.3" X 10.3" X 8.3"	42 LBS
-	-	-	-	-	-	-	-
1	AC DISTRIBUTION PANEL	TRANSECTOR	1101-1207-1012	-	1'±	12" X 12" X 4"	17 LBS
1	NEMA TYPE-3R DISCONNECT	SIEMENS	GF222NR	-	1'±	15.45" X 8.7" X 5.95"	14 LBS
1	METER SOCKET	MILBANK	U4801-XL-5T9	-	32'±	19" X 13" X 4.84"	21 LBS

RFDS REVISION TYPE: NOT FINAL  
RFDS REVISION NUMBER: N/A  
RFDS REVISION TIMESTAMP: N/A

BILL OF MATERIALS

SCALE: NOT TO SCALE

2



RISER ORIENTATION DIAGRAM

SCALE: NOT TO SCALE

3

**mobilitie**

120 S. RIVERSIDE PLAZA, SUITE 1800  
CHICAGO, IL 60606

OHIO EXCHANGE  
FACILITIES  
NETWORKS, LLC

PROJECT NO: ER600221

DRAWN BY: JDM

CHECKED BY: MRB

C 12.04.17 JX REVISION  
B 10.12.17 COMMENT REVISION  
A 09.28.17 FOR REVIEW

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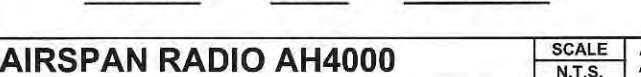
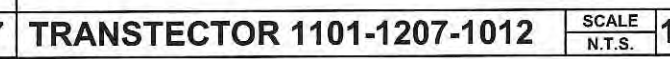
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90HB002710  
C190XS842A  
COMMONS BLVD.  
BEAVERCREEK, OH 45430  
PROPOSED STEEL UTILITY POLE

SHEET TITLE  
PLUMBING & RISER DIAGRAM

SHEET NUMBER  
PL-1





PROJECT NO:	ER60022
DRAWN BY:	JDM
CHECKED BY:	MRE

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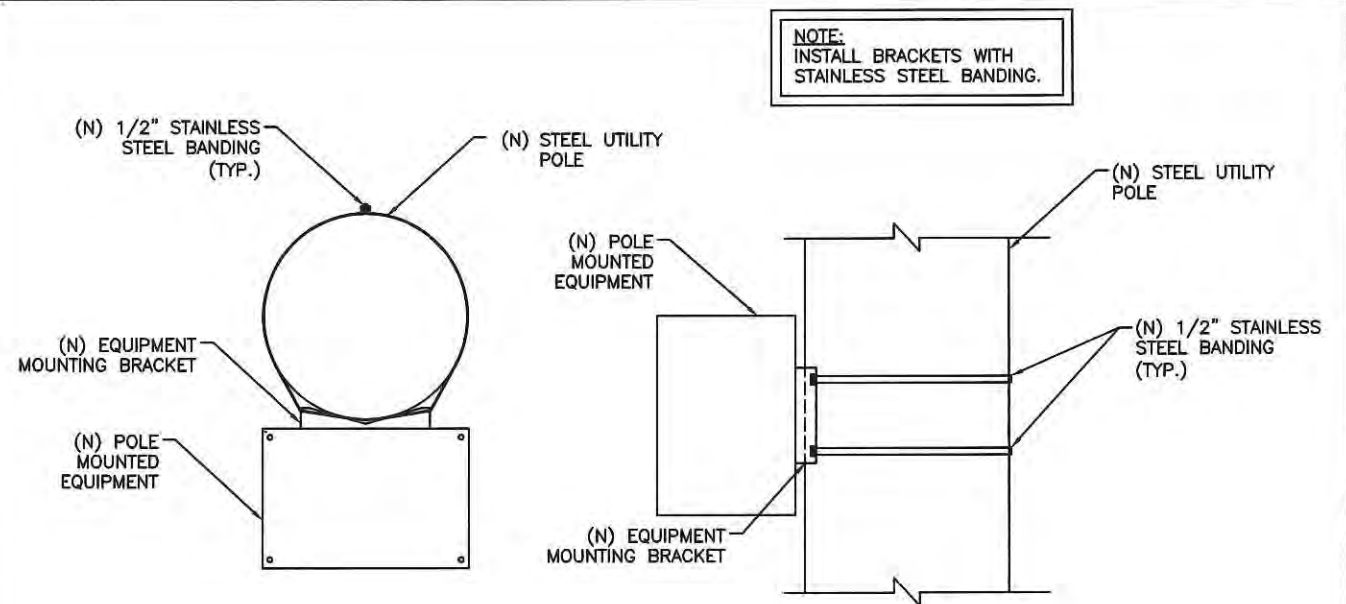
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90HB002710  
CI90XS842A  
COMMONS BLVD.  
BEAVERCREEK, OH 45430  
PROPOSED STEEL UTILITY POL

SHEET TITLE  
EQUIPMENT DETAILS

SHEET NUMBER  
**EQ-1**

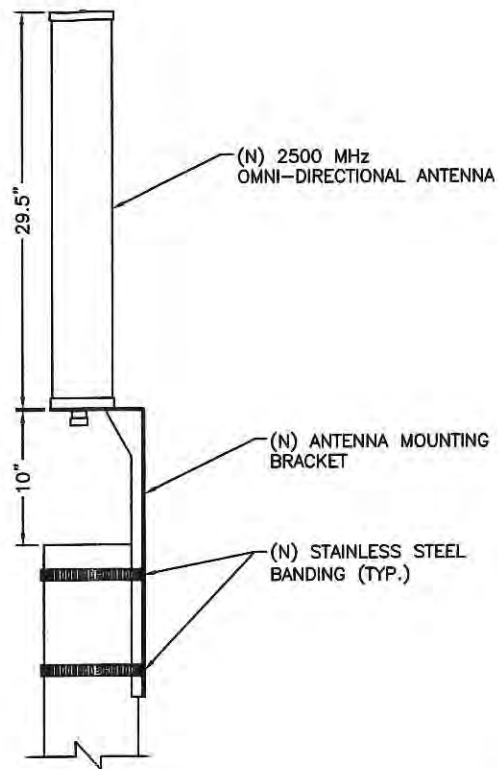




TOP VIEW

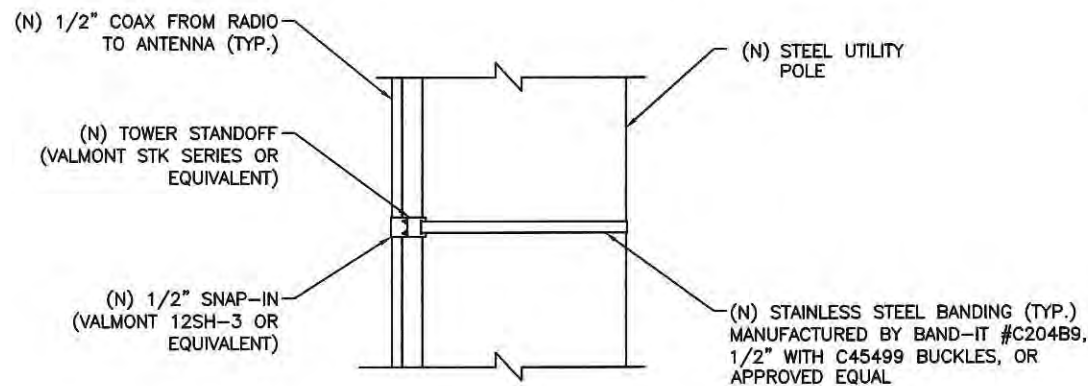
SIDE VIEW

EQUIPMENT MOUNTING DETAIL 1  
SCALE: NOT TO SCALE



NOTE:  
1. MOUNTING BRACKET ACCOMMODATES POLE SIZES FROM 3" TO 10" DIAMETER.  
2. JACOBS HAS NOT PERFORMED A STRUCTURAL EVALUATION FOR THE MOUNTING BRACKET. REFER TO THE MANUFACTURER FOR ADDITIONAL INFORMATION.

ANTENNA MOUNTING DETAIL 3  
SCALE: NOT TO SCALE



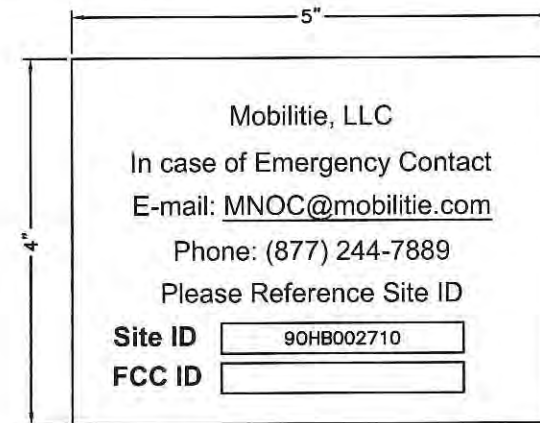
NOTE:  
SPACE SNAP-INS PER CABLE MANUFACTURER'S SPECIFICATIONS

CABLE MOUNTING DETAIL 2  
SCALE: NOT TO SCALE



ANTENNA SIGNAGE:  
ON WOOD POLES - SIGN ON ALUMINUM WITH SS SCREW TO THE POLE  
ON METAL POLES - ADHESIVE VINYL OR PLACARD STRAPPED WITH SS TIES  
ON CONCRETE / COMPOSITE - PLACARD STRAPPED WITH SS TIES  
SIGN PLACEMENT:  
AFFIX TO THE STRUCTURE 3-4' BELOW THE COMMERCIAL RF ANTENNA(S)  
SIZE APPROX. 8" x 5"

ANTENNA SIGNAGE



OWNER / OPERATOR NOTE:  
SITE ID LABEL TO BE AFFIXED AT OR NEAR THE POINT OF POWER CONNECTION WITH TZeS241 LABELING TAPE OR EQUIVALENT BLACK ON WHITE LABELING TAPE OF AT LEAST 18mm WIDTH WITH EXTRA-STRENGTH ADHESIVE. USE ANY COMPATIBLE P-TOUCH LABEL MAKER. TEXT SHOULD BE PRINTED IN ALL CAPS WITH A MINIMUM HEIGHT OF 1/2".

EMERGENCY CONTACT SIGN

POLE MOUNTED SIGNS 4  
SCALE: NOT TO SCALE

**mobilitie**  
120 S. RIVERSIDE PLAZA, SUITE 1800  
CHICAGO, IL 60606

OHIO EXCHANGE  
FACILITIES  
NETWORKS, LLC

PROJECT NO: ER600221  
DRAWN BY: JDM  
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90HB002710  
C190XS842A  
COMMONS BLVD.  
BEAVERCREEK, OH 45430  
PROPOSED STEEL UTILITY POLE

SHEET TITLE  
EQUIPMENT DETAILS

SHEET NUMBER  
EQ-2



120 S. RIVERSIDE PLAZA, SUITE 1800  
CHICAGO, IL 60606

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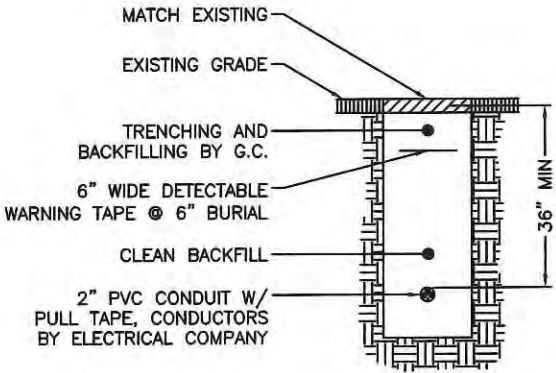


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BEAVERCREEK, OH 45430  
PROPOSED STEEL UTILITY POLE

SHEET TITLE  
EXCAVATION DETAILS

SHEET NUMBER  
EX-1



TRENCH SECTION DETAIL

SCALE: NOT TO SCALE

2

DIRECTIONAL BORING DETAILS

SCALE: NOT TO SCALE

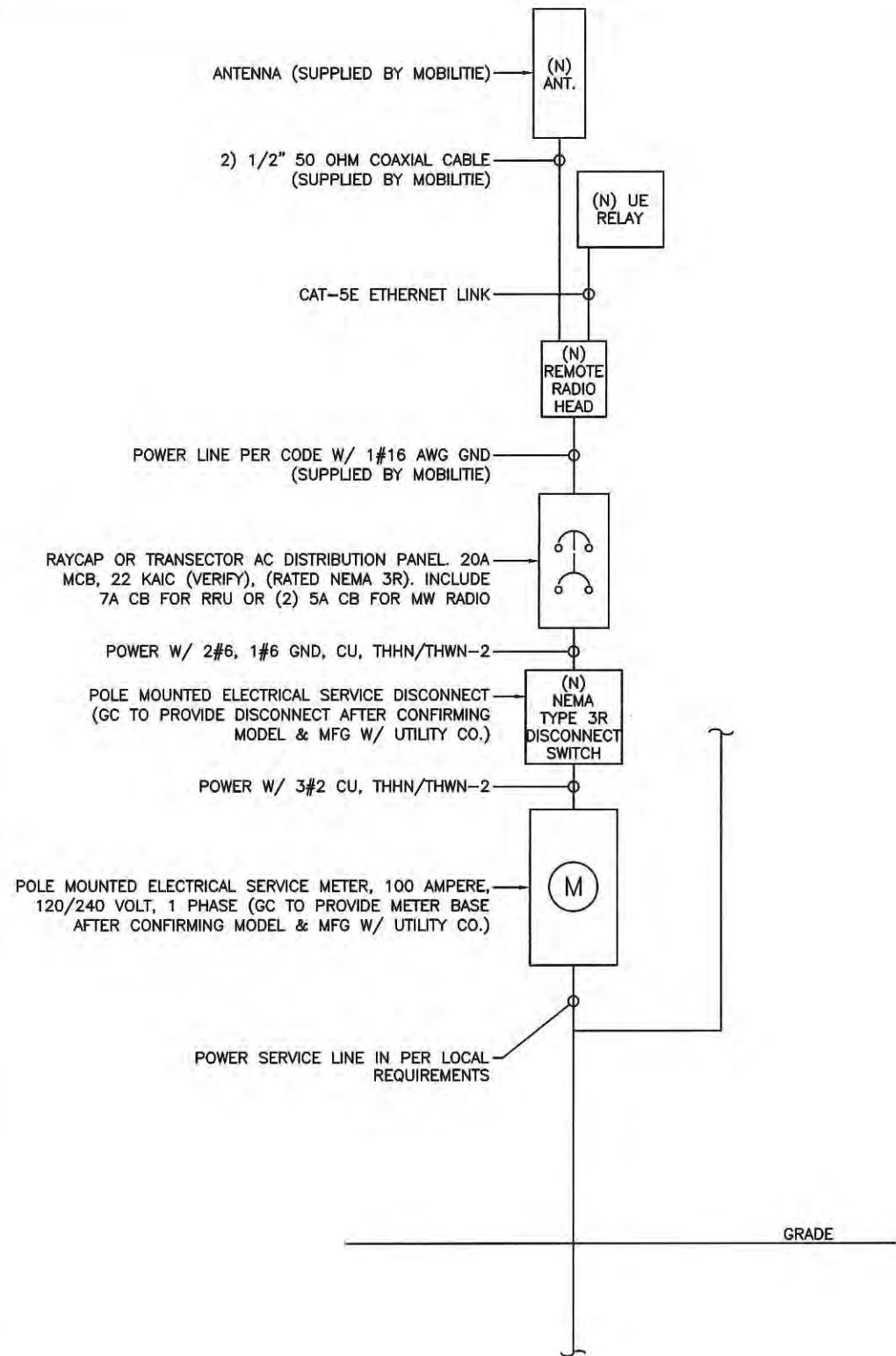
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NOT USED

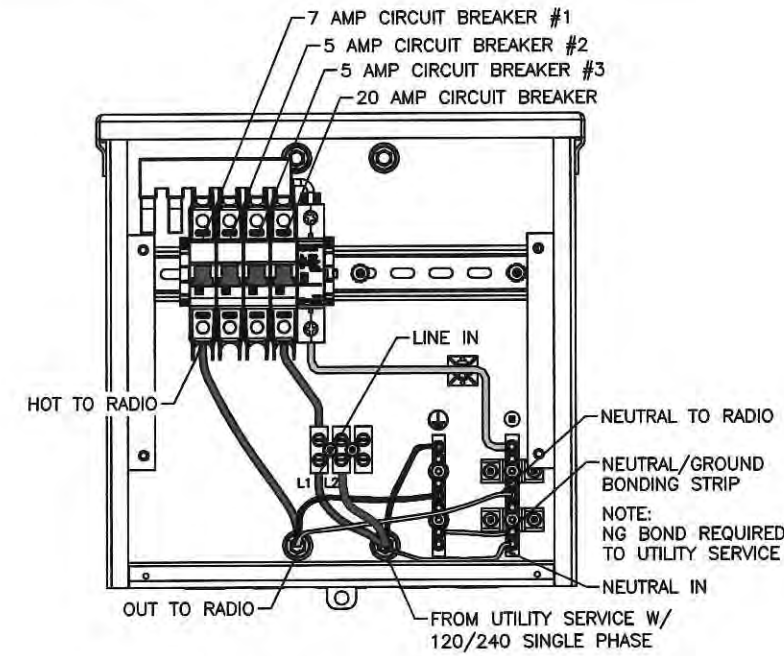
SCALE: NOT TO SCALE

3





ONE-LINE DIAGRAM  
SCALE: NOT TO SCALE  
1



TRANSECTOR EXPORT  
AC DISTRIBUTION BOX

BREAKER SCHEDULE  
SCALE: NOT TO SCALE  
2

- NOTES:
1. NOMINAL POWER IS CALCULATED AS 80% OF OEM DOCUMENTED MAXIMUM POWER.
  2. CALCULATIONS FOR UE W/ NOKIA DO NOT NEED TO INCLUDE THE POWER FOR THE UE ANTENNA AS IT IS INCLUDED IN THE MAX POWER FIGURE. CALCULATIONS FOR UE W/ AIRSPAN MUST INCLUDE UE AS IT IS NOT INCLUDED
  3. KVA IS CALCULATED FROM THE CONSUMPTION VALUE ASSUMING A PF=1. MAXIMUM POWER WAS USED FOR KVA. WHERE MAXIMUM WAS NOTED BY THE OEM THE QUOTED FIGURE WAS USED. WHERE AVERAGE/NOMINAL POWER WAS NOTED BY THE OEM MAXIMUM POWER WAS CALCULATED BY INCREASING AVERAGE/NOMINAL POWER BY A FACTOR OF 50%

Airspan Scenario 2 AH4000 High Power Radio and UE Backhaul

Unit	Sub Description	Max Power (W)	Max Current (A)	KVA	kWh/Yr
AirHarmony 4000	LTE Base Station	540	4.50	0.54	4730.4
Airspan IR460	UE Relay	N/A	N/A	N/A	N/A
Total		540	4.50	0.54	4730.4

LOAD CALCULATIONS  
SCALE: NOT TO SCALE  
3

**mobilitie**  
120 S. RIVERSIDE PLAZA, SUITE 1800  
CHICAGO, IL 60606

OHIO EXCHANGE  
FACILITIES  
NETWORKS, LLC

PROJECT NO: ER600221  
DRAWN BY: JDM  
CHECKED BY: MRB

C	12.04.17	JX REVISION
B	10.12.17	COMMENT REVISION
A	09.28.17	FOR REVIEW



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90HB002710  
C/90XS842A  
COMMONS BLVD.  
BEAVERCREEK, OH 45430  
PROPOSED STEEL UTILITY POLE

SHEET TITLE  
ELECTRICAL DETAILS

SHEET NUMBER  
E-1



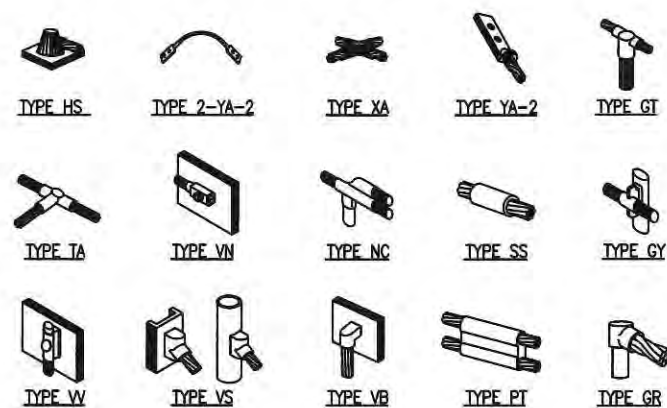
#6 THHN/THWN GREEN  
STRANDED FROM EQUIPMENT TO  
MAIN GROUND CONDUCTOR, TYP.

THIN WALL C-TAP WITH  
BLACK DYE INDEX

#6 SOLID TIN COATED MAIN  
GROUND CONDUCTOR

SCALE: NOT TO SCALE

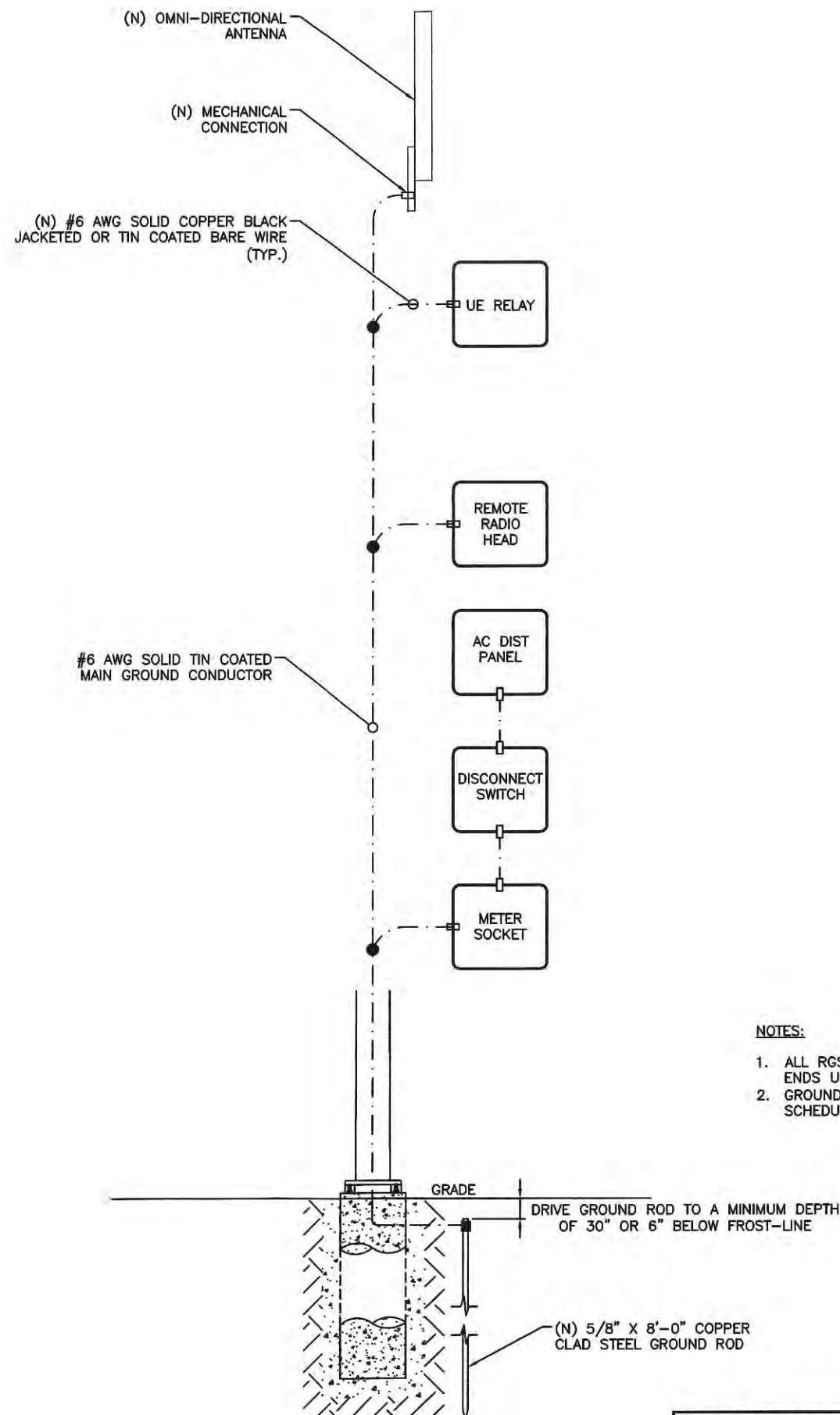
1



ERICO EXOTHERMIC "MOLD TYPES" SHOWN HERE ARE EXAMPLES.  
CONSULT WITH PROJECT MANAGER FOR SPECIFIC MOLDS TO BE  
USED FOR THIS PROJECT.

SCALE: NOT TO SCALE

2



SCALE: NOT TO SCALE

3

**NOTE:**  
GROUNDING RISER FOR DIAGRAMMATIC  
PURPOSES ONLY. SEE ELEVATION DRAWING  
FOR EQUIPMENT AND ANTENNA LOCATIONS.

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**SHEET TITLE**

## GROUNDING DETAILS

SHEET NUMBER

**G-1**

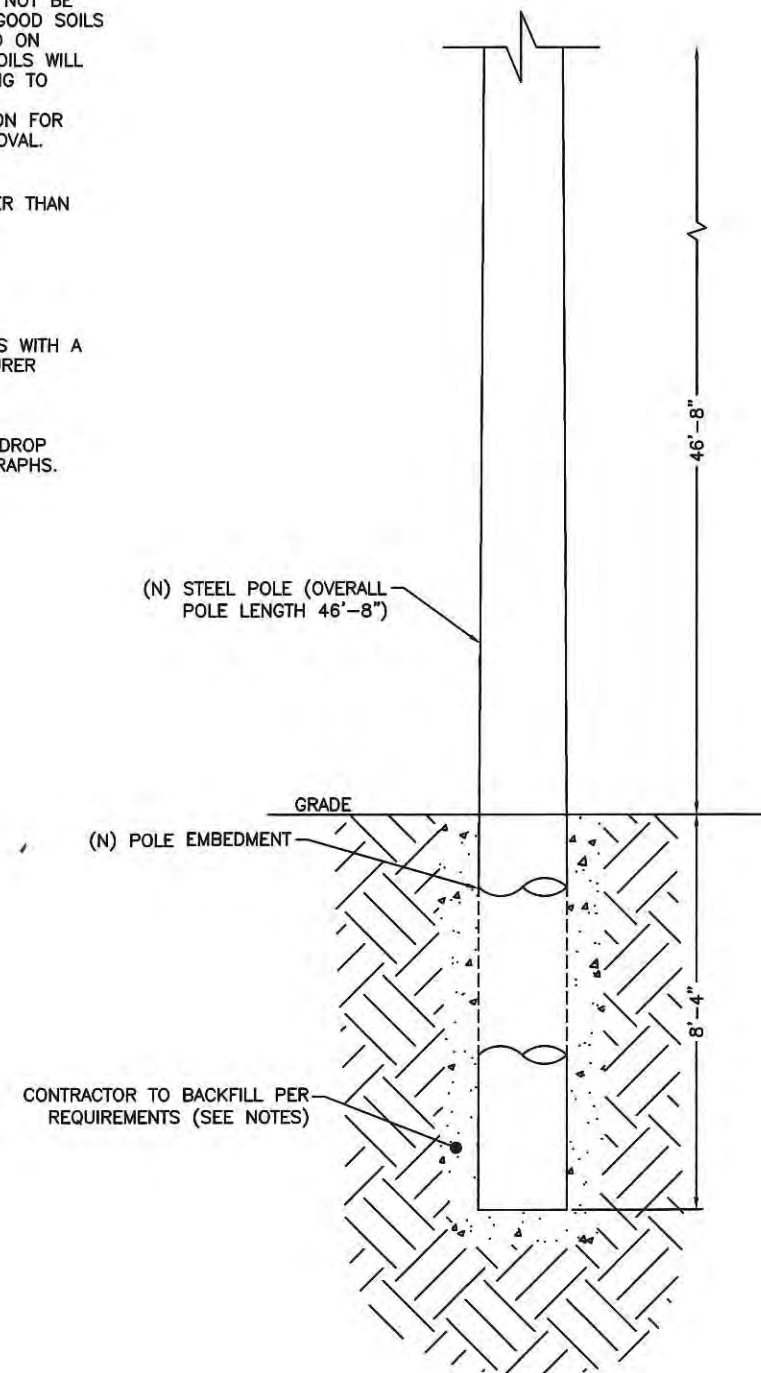


GENERAL CONSTRUCTION NOTES:

1. PRIOR TO ANY CONSTRUCTION WORK, CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES. ALL UTILITIES SHALL BE MARKED.
2. BACKFILL OF THE POLES SHALL BE PERFORMED BASED ON THE WATER TABLE. FLOWABLE FILL MIXTURES PURCHASED FROM CONCRETE PLANTS WILL BE USED INSTEAD OF FOAM IN WATER TABLE AREAS.
  - A: NORMAL SOILS ORDER OF PREFERENCE – FOAM, FLOWABLE FILL, CONCRETE, COMPACTED AGGREGATES
  - B: HIGH WATER TABLE SOILS ORDER OF PREFERENCES – FLOWABLE FILL, CONCRETE, COMPACTED AGGREGATES.
3. NON-NATIVE SOILS SHALL BE REMOVED FROM BORE AREA AND SHALL NOT BE REUSED FOR BACKFILL. EMBED DEPTHS SHOWN ARE GENERALLY FOR GOOD SOILS AND UTILITY WOOD POLES. EMBED DEPTHS SHALL BE ADJUSTED BASED ON ACTUAL SOIL CONDITIONS AND FINAL POLE CLASS SELECTION. POOR SOILS WILL REQUIRE DEEPER EMBEDS. SOIL CONDITIONS ARE CLASSIFIED ACCORDING TO BEARING CAPACITY: "POOR": 0 TO 2,500 PSI, "AVERAGE": 2,501 PSI TO 8,000 PSI, "GOOD": GREATER THAN 8,000 PSI. GUYING IS AN OPTION FOR REDUCING EMBED DEPTHS BUT REQUIRES MOBILTIE CM WRITTEN APPROVAL.
4. FOUNDATION HOLE SHALL BE EXCAVATED TO A MINIMUM OF 12" LARGER THAN POLE BASE DIAMETER TO ALLOW FOR SUITABLE BACKFILL PLACEMENT.
5. REMOVE EXCESS WATER FROM HOLE BEFORE INSTALLING POLE.
6. CONTRACTOR SHALL PREPARE LIFT PLANS FOR POLE SETTING ACTIVITIES WITH A BOOM TRUCK OR CRANE. ATTACH LIFTING SLING PER POLE MANUFACTURER RECOMMENDATIONS.
7. IF REQUIRED BY MOBILTIE CM, CONTRACTOR SHALL PERFORM A TAPE DROP MEASUREMENT OF EXCAVATED HOLE AND WITNESS DROP WITH PHOTOGRAPHS.

NOTE:  
SEE GN-3 FOUNDATION, EXCAVATION AND BACKFILL FOR ADDITIONAL NOTES.

NOTE:  
REFER TO STRUCTURAL ANALYSIS REPORT (SEPARATE DOCUMENT) FOR ADDITIONAL STRUCTURAL INFORMATION.



Pole Diameter (Inches)	Hole Depth (Feet)							
	4	5	6	7	8	9	10	
8" Hole Diameter								
5.0	1	1						
6.2	1	1						
18" Hole Diameter								
7.0	6	8	9	11	12	13	15	
8.0	6	7	9	10	12	12	14	
9.0	6	7	8	9	11	12	13	
10.0	5	6	8	9	9	11	12	
11.0	5	6	7	8	9	10	11	
12.0	4	5	6	7	8	9	10	
13.0	4	4	5	6	7	7	9	
14.0	3	4	4	5	6	6	7	
15.0	2	3	4	4	5	5	6	
16.0	2	2	2	3	3	3	4	
24" Hole Diameter								
12.0	10	12	14	17	19	20	24	
13.0	9	11	14	16	18	19	22	
14.0	9	11	13	15	17	18	21	
15.0	8	10	12	14	16	17	19	
16.0	7	9	11	12	14	15	18	
17.0	7	8	10	11	13	14	16	
18.0	6	7	9	10	11	12	14	
19.0	5	6	7	9	10	10	12	
20.0	4	5	6	7	8	8	10	
22.0	2	3	3	4	3	5	5	
36" Hole Diameter								
18.0			32	37	43	45	53	
20.0			30	34	39	42	49	
22.0			27	31	36	38	44	
24.0			24	28	32	34	39	
26.0			21	24	27	29	33	
28.0			17	20	23	24	27	
30.0			13	15	18	19	21	
32.0			9	11	12	13	15	
34.0			5	6	6	7	7	
48" Hole Diameter								
36.0	39	44	47	55	61	66	77	
38.0	33	38	40	47	52	56	65	
40.0	27	31	33	39	42	46	54	
42.0	21	24	25	30	33	38	41	
44.0	14	16	17	20	22	24	28	
46.0	8	8	9	10	12	12	15	

POLE EMBEDMENT DETAILS

SCALE: NOT TO SCALE



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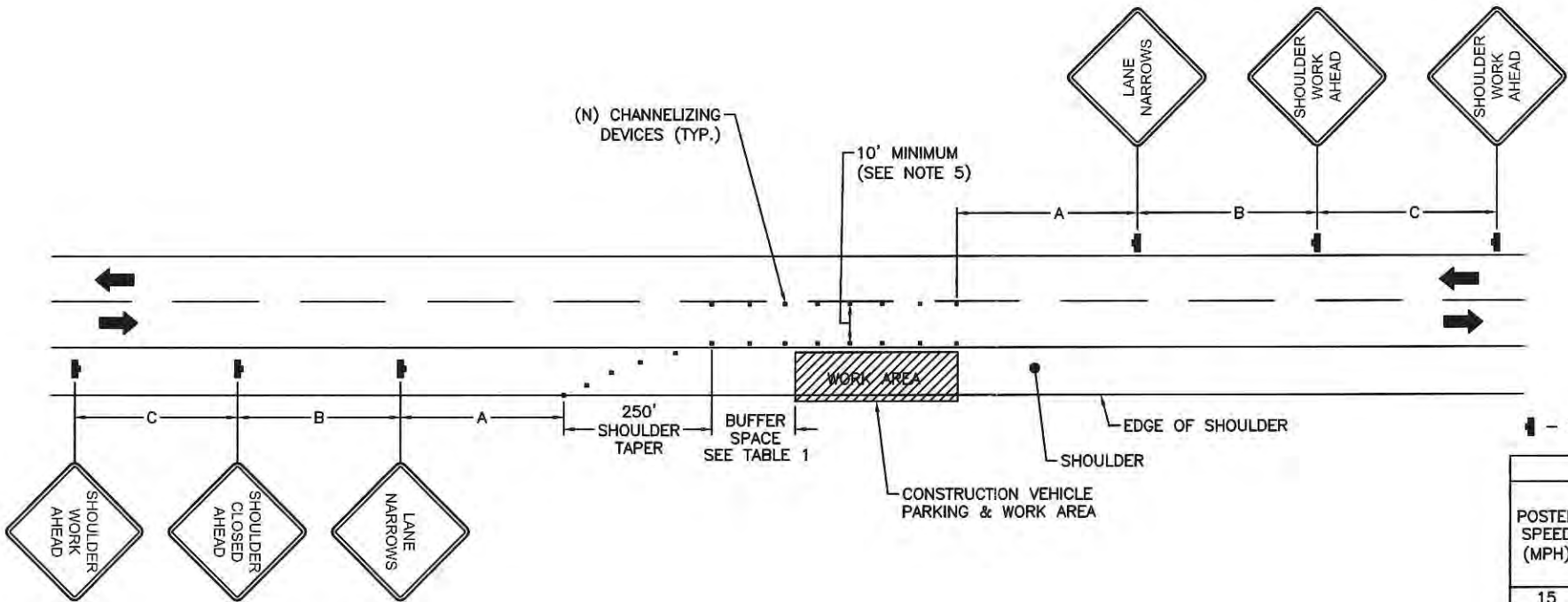
SHEET TITLE  
POLE EMBEDMENT DETAILS

SHEET NUMBER  
S-1



PLAN NOTES:

1. PLANS DEPICTED ARE GENERAL GUIDELINES FOR TEMPORARY VEHICULAR TRAFFIC CONTROL PLANS (TCP) TO INCLUDE PEDESTRIAN AND WORKER SAFETY. CONTRACTOR IS REQUIRED TO HAVE PREPARED A SITE-SPECIFIC TCP FOR REVIEW AND APPROVAL BY THE HIGHWAY AUTHORITY HAVING JURISDICTION. IF REQUIRED, THE FIRM PREPARING THE TCP SHALL BE AUTHORIZED OR CERTIFIED BY THE AUTHORITY HAVING JURISDICTION.
2. EXTEND CHANNELIZATION DEVICES INTO SHOULDER WHERE APPLICABLE.
3. DISTANCES AS INDICATED IN TABLE 1 SHOULD BE INCREASED FOR CONDITIONS THAT WOULD AFFECT STOPPING. DISTANCE SUCH AS DOWNGRADES OR LIMITED SIGHT DISTANCES. DISTANCES CAN BE DECREASED FOR LOW-SPEED (RESIDENTIAL) AREAS WITH APPROVAL BY THE AUTHORITY HAVING JURISDICTION. NIGHT-TIME WORK IS PROHIBITED UNLESS IT IS REQUIRED AS A CONDITION OF APPROVAL BY THE HIGHWAY AND LOCAL AUTHORITY HAVING JURISDICTION.
4. SHOULDER TAPERS SHOULD BE 1/3 OF THE ON-STREET TAPER LENGTH.
5. MAINTAIN A MINIMUM LANE WIDTH OF 10'.



— SIGN

TABLE 1					
POSTED SPEED (MPH)	DISTANCE BETWEEN SIGNS			TAPER	BUFFER
	A	B	C	L (SEE NOTE)	
15	100'	100'	100'	45'	100'
20	100'	100'	100'	80'	115'
25	100'	100'	100'	125'	155'
30	200'	200'	200'	180'	200'
35	200'	200'	200'	245'	250'
40	350'	350'	350'	320'	305'
45	350'	350'	350'	540'	360'
50	500'	500'	500'	600'	425'
55	500'	500'	500'	660'	495'
60	500'	500'	500'	720'	570'
65	500'	500'	500'	780'	645'

- NOTES:
- A) DISTANCES IN FEET UNLESS OTHERWISE NOTED.
  - B) CONTRACTOR TO VERIFY (E) SPEED LIMIT.
  - C) DISTANCES SHOWN ARE NOT VALID FOR LIMITED ACCESS HIGHWAYS. CONSULT STATE DOT MANUAL FOR DISTANCES.
  - D) ADJUST DISTANCES TO COMPLY WITH REQUIREMENT OF THE STATE OR LOCAL HIGHWAY AUTHORITY HAVING JURISDICTION. SEE NOTE 1, SHEET TC-2.
  - E) TAPER LENGTHS SHOWN BASED ON 12' LANE WIDTH. SEE NOTE 18, SHEET TC-2.

VEHICULAR TRAFFIC CONTROL PLAN - SHOULDER WORK

SCALE: NOT TO SCALE

1

**mobilitie**

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PROPOSED STEEL UTILITY POLE

SHEET TITLE  
VEHICULAR TRAFFIC  
CONTROL PLAN

SHEET NUMBER  
TC-1







GENERAL CONSTRUCTION NOTES:

1. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE LOCAL BUILDING CODE, THE LATEST ADOPTED EDITION AND ALL OTHER APPLICABLE CODES AND ORDINANCES.

2. CONTRACTOR SHALL CONSTRUCT SITE IN ACCORDANCE WITH THESE DRAWINGS AND LATEST MOBILITIE CONSTRUCTION STANDARDS. THE SPECIFICATION IS THE RULING DOCUMENT AND ANY DISCREPANCIES BETWEEN THE SPECIFICATION AND THE CONSTRUCTION DRAWINGS SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER OR MOBILITIE CM PRIOR TO THE COMMENCEMENT OF WORK.

3. CONTRACTOR SHALL VISIT THE JOB SITE AND SHALL FAMILIARIZE THEMSELVES WITH ALL CONDITIONS AFFECTING THE (N) WORK AND SHALL MAKE PROVISIONS AS TO THE COST THEREOF. CONTRACTOR SHALL BE RESPONSIBLE FOR FAMILIARIZING THEMSELVES WITH ALL CONTRACT DOCUMENTS, FIELD CONDITIONS AND DIMENSIONS AND CONFIRMING THAT THE WORK MAY BE ACCOMPLISHED, AS SHOWN, PRIOR TO PROCEEDING WITH CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER OR MOBILITIE CM PRIOR TO THE COMMENCEMENT OF WORK. NO COMPENSATION WILL BE AWARDED BASED ON CLAIM OF LACK OF KNOWLEDGE OF FIELD CONDITIONS.

4. IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. CONTRACTOR IS REQUIRED TO FURNISH AND INSTALL ANY/ALL ITEMS FOR A COMPLETE AND FULLY FUNCTIONAL SYSTEM SUBJECT ONLY TO OWNER-SUPPLIED ITEMS. CONTRACTOR SHALL PROVIDE ANY/ALL REQUIREMENTS FOR THE EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.

5. PLANS ARE NOT TO BE SCALED. THESE PLANS ARE INTENDED TO BE A DIAGRAMMATIC OUTLINE ONLY UNLESS OTHERWISE NOTED. THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT AND APPURTENANCES, AND LABOR NECESSARY TO EFFECT ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS. OWNER PROVIDED AND CONTRACTOR INSTALLED MATERIALS WILL INCLUDE THE FOLLOWING, UNLESS NOTED OTHERWISE:

A) TRANSMITTER

B) UHF ANTENNA AND MOUNTING BRACKETS, GPS UNIT AND KU BACKHAUL

C) UHF COAX AND HANGERS

D) INTEGRATED LOAD CENTER

6. DIMENSIONS SHOWN ARE TO FINISH SURFACES UNLESS OTHERWISE NOTED. SPACING BETWEEN EQUIPMENT IS REQUIRED CLEARANCE. THEREFORE, IT IS CRITICAL TO FIELD VERIFY DIMENSIONS. SHOULD THERE BE ANY QUESTIONS REGARDING THE CONTRACT DOCUMENTS, (E) CONDITIONS AND/OR DESIGN INTENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPORTING ANY DISCREPANCIES TO THE ATTENTION OF THE MOBILITIE CM, IN WRITING, PRIOR TO THE COMMENCEMENT OF WORK.

7. DETAILS PROVIDED ARE FOR THE PURPOSE OF SHOWING DESIGN INTENT. MODIFICATIONS MAY BE REQUIRED TO SUIT JOB DIMENSIONS OR SITE CONDITIONS, AND SUCH MODIFICATIONS SHALL BE INCLUDED AS PART OF THE WORK.

8. CONTRACTOR SHALL PAY FOR APPLICABLE PERMITS, FEES, INSPECTIONS AND TESTING. CONTRACTOR IS TO OBTAIN PERMITS AND APPROVED SUBMITTALS PRIOR TO ORDERING MATERIALS AND THE COMMENCEMENT OF WORK.

9. THE TERM 'PROVIDE' USED IN CONSTRUCTION DOCUMENTS AND SPECIFICATIONS, INDICATES THAT THE CONTRACTOR SHALL FURNISH AND INSTALL.

10. CONTRACTOR SHALL RECEIVE CLARIFICATION IN WRITING, AND SHALL RECEIVE IN WRITING AUTHORIZATION TO PROCEED BEFORE STARTING WORK ON ANY ITEMS NOT CLEARLY DEFINED OR IDENTIFIED BY THE CONTRACT DOCUMENTS.

11. CONTRACTOR SHALL SUPERVISE AND DIRECT THE WORK USING ACCEPTED INDUSTRY-STANDARD SKILLS AND ATTENTION. CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER CONTRACT, UNLESS OTHERWISE NOTED.

12. CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE WORK AREA, ADJACENT AREAS AND BUILDING OCCUPANTS THAT ARE LIKELY TO BE AFFECTED BY THE WORK UNDER THIS CONTRACT. WORK SHALL CONFORM TO ALL OSHA REQUIREMENTS.

13. CONTRACTOR SHALL COORDINATE THEIR WORK WITH THE MOBILITIE CM AND SCHEDULE THEIR ACTIVITIES AND WORKING HOURS IN ACCORDANCE WITH THE REQUIREMENTS.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THEIR WORK WITH THE WORK OF OTHERS AS IT MAY RELATE TO RADIO EQUIPMENT, ANTENNAS AND ANY OTHER PORTIONS OF THE WORK.

15. CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS UNLESS SPECIFICALLY OTHERWISE INDICATED OR WHERE LOCAL CODES OR REGULATIONS TAKE PRECEDENCE.

16. CONTRACTOR SHALL MAKE NECESSARY PROVISIONS TO PROTECT (E) SURFACES, EQUIPMENT, IMPROVEMENTS, PIPING ETC. AND IMMEDIATE REPAIR, TO NEW CONDITION, ANY DAMAGE THAT OCCURS DURING CONSTRUCTION AT THE SOLE COST OF THE CONTRACTOR.

17. IN DRILLING HOLES, OR CORING, INTO CONCRETE WHETHER FOR FASTENING OR ANCHORING PURPOSES, OR PENETRATIONS THROUGH THE FLOOR FOR CONDUIT RUNS, PIPE RUNS, ETC., MUST BE CLEARLY UNDERSTOOD THAT REINFORCING STEEL SHALL NOT BE DRILLED INTO, CUT OR DAMAGED UNDER ANY CIRCUMSTANCES (UNLESS NOTED OTHERWISE). LOCATIONS OF REINFORCING STEEL ARE NOT DEFINITELY KNOWN AND THEREFORE MUST BE LOCATED BY THE CONTRACTOR USING APPROPRIATE METHODS AND EQUIPMENT PRIOR TO ANY DRILLING OR CORING OPERATIONS IN (E) CONCRETE.

18. CONTRACTOR SHALL REPAIR, TO NEW CONDITION, ALL (E) WALL SURFACES DAMAGED DURING CONSTRUCTION SUCH THAT THEY MATCH AND BLEND IN WITH ADJACENT SURFACES.

19. CONTRACTOR SHALL SEAL PENETRATIONS THROUGH FIRE RATED ASSEMBLIES OR MATERIALS WITH U.L. LISTED AND FIRE CODE APPROVED MATERIALS AND SYSTEMS THAT MEET OR EXCEED THE RATING OF THE ASSEMBLY IN WHICH THE NEW PENETRATION IS PLACED.

20. CONTRACTOR SHALL KEEP CONTRACT AREA CLEAN, HAZARD FREE, AND DISPOSE OF ALL DIRT, DEBRIS, AND RUBBISH. EQUIPMENT NOT SPECIFIED AS REMAINING ON THE PROPERTY OF THE OWNER SHALL BE REMOVED. LEAVE PREMISES IN CLEAN CONDITION AND FREE FROM PAINT SPOTS, DUST, OR SMUDGES OF ANY NATURE. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL ITEMS UNTIL COMPLETION OF CONSTRUCTION.

21. MINIMUM BEND RADIUS OF ANTENNA CABLES SHALL BE IN ACCORDANCE WITH CABLE MANUFACTURERS RECOMMENDATIONS.

22. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO (E) SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION SHALL BE IN CONFORMANCE WITH JURISDICTIONAL OR STATE AND LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL AND COORDINATED WITH LOCAL REGULATORY AUTHORITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF ANY EROSION CONTROL MEASURES, RECORD-KEEPING, MONITORING, AND REPORTING TO THE OWNER AND REGULATORY AUTHORITIES.

23. ALL CONSTRUCTION WORK IS TO ADHERE TO APPLICANT'S INTEGRATED CONSTRUCTION STANDARDS UNLESS STATE OR LOCAL CODE IS MORE STRINGENT.

24. THE INTENT OF THE PLANS AND SPECIFICATIONS IS TO PERFORM THE CONSTRUCTION IN ACCORDANCE PER STATE BUILDING STANDARDS CODE AND STATE CODE OF REGULATIONS. SHOULD ANY CONDITIONS DEVELOP NOT COVERED BY THE APPROVED PLANS AND SPECIFICATIONS WHEREIN THE FINISHED WORK WILL NOT COMPLY PER STATE CODE OF REGULATIONS, A SCOPE OF WORK DETAILING AND SPECIFYING THE REQUIRED WORK SHALL BE SUBMITTED TO AND APPROVED BY THE JURISDICTION BEFORE PROCEEDING WITH THE WORK. A CHANGE ORDER FOR THAT SCOPE SHALL BE SUBMITTED TO THE MOBILITIE CM PRIOR TO PROCEEDING WITH THE WORK.

25. ADEQUATE AND REQUIRED LIABILITY INSURANCE SHALL BE PROVIDED BY THE CONTRACTOR FOR PROTECTION AGAINST PUBLIC LOSS AND ANY/ALL PROPERTY DAMAGE FOR THE DURATION OF WORK.

26. CONTRACTOR SHALL GUARANTEE ANY/ALL MATERIALS AND WORK FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN ONE YEAR FROM DATE OF ACCEPTANCE. ANY CORRECTIVE WORK SHALL BE COMPLETED AT THE SOLE COST OF THE CONTRACTOR.

ELECTRICAL NOTES:

1. ELECTRICAL CONTRACTOR SHALL SUPPLY AND INSTALL ANY/ALL ELECTRICAL WORK INDICATED. ANY/ALL CONSTRUCTION SHALL BE IN ACCORDANCE W/DRAWINGS AND ANY/ALL APPLICABLE SPECIFICATIONS. IF ANY PROBLEMS ARE ENCOUNTERED BY COMPLYING WITH THESE REQUIREMENTS, CONTRACTOR SHALL NOTIFY MOBILITIE CM AS SOON AS POSSIBLE, AFTER THE DISCOVERY OF THE PROBLEMS, AND SHALL NOT PROCEED WITH THAT PORTION OF WORK, UNTIL THE MOBILITIE CM HAS DIRECTED THE CORRECTIVE ACTIONS TO BE TAKEN.

2. ELECTRICAL CONTRACTOR SHALL VISIT THE JOB SITE AND FAMILIARIZE THEMSELVES WITH ANY/ALL CONDITIONS AFFECTING ELECTRICAL AND COMMUNICATION INSTALLATION AND MAKE PROVISIONS AS TO THE COST THEREOF. ALL (E) CONDITIONS OF ELECTRICAL EQUIP., ETC., THAT ARE PART OF THE FINAL SYSTEM, SHALL BE VERIFIED BY THE CONTRACTOR, PRIOR TO THE SUBMITTING OF THEIR BID. FAILURE TO COMPLY WITH THIS PARAGRAPH WILL IN NO WAY RELIEVE CONTRACTOR OF PERFORMING ALL WORK NECESSARY FOR A COMPLETE AND WORKING SYSTEM.
3. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NEC, ALL CODES AND ORDINANCES OF THE LOCAL JURISDICTION, AND POWER & TELEPHONE COMPANIES HAVING JURISDICTION AND SHALL INCLUDE BUT ARE NOT BE LIMITED TO:

A) UL – UNDERWRITERS LABORATORIES

B) NEC – NATIONAL ELECTRICAL CODE

C) NEMA – NATIONAL ELECTRICAL MANUFACTURERS ASSOC.

D) OSHA – OCCUPATIONAL SAFETY AND HEALTH ACT

E) SBC – STANDARD BUILDING CODE

F) NFPA – NATIONAL FIRE PROTECTION AGENCY

G) ANSI – AMERICAN NATIONAL STANDARDS INSTITUTE

H) IEEE – INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS

I) ASTM – AMERICAN SOCIETY FOR TESTING MATERIALS
4. REFER TO SITE PLANS AND ELEVATIONS FOR EXACT LOCATIONS OF ALL EQUIPMENT, AND CONFIRM WITH MOBILITIE CM ANY SIZES AND LOCATIONS WHEN NEEDED.
5. (E) SERVICES: CONTRACTOR SHALL NOT INTERRUPT (E) SERVICES WITHOUT WRITTEN PERMISSION OF THE OWNER.
6. CONTRACTOR SHALL CONFIRM WITH LOCAL UTILITY COMPANY ANY/ALL REQUIREMENTS SUCH AS THE: LUG SIZE RESTRICTIONS, CONDUIT ENTRY, SIZE OF TRANSFORMERS, SCHEDULED DOWNTIME FOR THE OWNERS' CONFIRMATION, ETC... ANY/ALL CONFLICTS SHALL BE BROUGHT TO THE ATTENTION OF THE MOBILITIE CM, PRIOR TO BEGINNING ANY WORK.
7. MINIMUM WIRE SIZE SHALL BE #12 AWG, NOT INCLUDING CONTROL WIRING, UNLESS NOTED OTHERWISE. ALL CONDUCTORS SHALL BE COPPER WITH THWN INSULATION, UNLESS OTHERWISE NOTED.
8. OUTLET BOXES SHALL BE PRESSED STEEL IN DRY LOCATIONS, CAST ALLOY WITH THREADED HUBS IN WET/DAMP LOCATIONS AND SPECIAL ENCLOSURES FOR OTHER CLASSIFIED AREAS.
9. IT IS NOT THE INTENT OF THESE PLANS TO SHOW EVERY MINOR DETAIL OF THE CONSTRUCTION. CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL ITEMS FOR A COMPLETE ELECTRICAL SYSTEM AND PROVIDE ALL REQUIREMENTS FOR THE EQUIPMENT TO BE PLACED IN PROPER WORKING ORDER.
10. ELECTRICAL SYSTEM SHALL BE AS COMPLETELY AND EFFECTIVELY GROUNDED, AS REQUIRED BY SPECIFICATIONS, SET FORTH BY APPLICANT.
11. ALL WORK SHALL BE PERFORMED BY A LICENSED ELECTRICAL CONTRACTOR IN A FIRST CLASS, WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY FUNCTIONAL AND SHALL BE APPROVED BY THE MOBILITIE CM AND LOCAL JURISDICTION. ANY DEFICIENCIES SHALL BE CORRECTED BY AN ELECTRICAL CONTRACTOR AT THE SOLE COST OF THE CONTRACTOR.
12. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.



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PROPOSED STEEL UTILITY POLE

SHEET TITLE  
GENERAL NOTES

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ELECTRICAL NOTES CONT'D

13. THE CORRECTION OF ANY DEFECTS SHALL BE COMPLETED BY THE CONTRACTOR WITHOUT ANY ADDITIONAL CHARGE AND SHALL INCLUDE THE REPLACEMENT OR THE REPAIR OF ANY OTHER PHASE OF THE INSTALLATION, WHICH MAY HAVE BEEN DAMAGED THEREIN.
14. CONTRACTOR SHALL PROVIDE AND INSTALL CONDUIT, CONDUCTORS, PULL WIRES, BOXES, COVER PLATES AND DEVICES FOR ALL OUTLETS AS INDICATED.
15. DITCHING AND BACK FILL: CONTRACTOR SHALL PROVIDE FOR ALL UNDERGROUND INSTALLED CONDUIT AND/OR CABLES INCLUDING EXCAVATION AND BACKFILLING AND COMPACTION. REFER TO NOTES AND REQUIREMENTS 'EXCAVATION, AND BACKFILLING.
16. MATERIALS, PRODUCTS AND EQUIPMENT, INCLUDING ALL COMPONENTS THEREOF, SHALL BE NEW AND SHALL APPEAR ON THE LIST OF U.L. APPROVED ITEMS AND SHALL MEET OR EXCEED THE REQUIREMENTS OF THE NEC, NEMA AND IECE.
17. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS OR MANUFACTURER'S CATALOG INFORMATION OF ANY/ALL EQUIPMENT AND ALL OTHER ELECTRICAL ITEMS FOR APPROVAL BY THE MOBILITIE CM PRIOR TO INSTALLATION.
18. ANY CUTTING OR PATCHING DEEMED NECESSARY FOR ELECTRICAL WORK IS THE ELECTRICAL CONTRACTORS RESPONSIBILITY AND SHALL BE INCLUDED IN THE COST FOR WORK AND PERFORMED TO THE SATISFACTION OF THE MOBILITIE CM UPON FINAL ACCEPTANCE.
19. THE ELECTRICAL CONTRACTOR SHALL LABEL ALL PANELS WITH ONLY TYPEWRITTEN DIRECTORIES. ALL ELECTRICAL WRING SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR.
20. DISCONNECT SWITCHES SHALL BE UL-RATED, H.P. RATED HEAVY-DUTY, QUICK-MAKE AND QUICK-BREAK ENCLOSURES, AS REQUIRED BY EXPOSURE TYPE.
21. ALL CONNECTIONS SHALL BE MADE WITH A PROTECTIVE COATING OF AN ANTI-OXIDE COMPOUND KNOWN AS "NO-OXIDE A" BY DEARBORNE CHEMICAL CO. COAT ALL WIRE SURFACES BEFORE CONNECTING. EXPOSED COPPER SURFACES, INCLUDING GROUND BARS, SHALL BE TREATED - NO SUBSTITUTIONS.
22. RACEWAYS: CONDUIT SHALL BE SCHEDULE 80 PVC MEETING OR EXCEEDING NEMA TC2 - 1990. CONTRACTOR SHALL PLUG AND CAP EACH END OF SPARE AND EMPTY CONDUITS AND PROVIDE TWO SEPARATE PULL STRINGS - 200 LBS TEST POLYETHYLENE CORD. ALL CONDUIT BENDS SHALL BE A MINIMUM OF 2 FT. RADIUS. RGS CONDUITS WHEN SPECIFIED, SHALL MEET UL-6 FOR GALVANIZED STEEL. ALL FITTINGS SHALL BE SUITABLE FOR USE WITH THREADED RIGID CONDUIT. COAT ALL THREADS WITH 'BRITE ZINC' OR 'COLD GALV'.
23. SUPPORT OF ALL ELECTRICAL WORK SHALL BE AS REQUIRED BY NEC.
24. CONDUCTORS: CONTRACTOR SHALL USE 98% CONDUCTIVITY COPPER WITH TYPE THWN INSULATION, UNLESS OTHERWISE NOTED, 600 VOLT, COLOR CODED. USE SOLID CONDUCTORS FOR WIRE UP TO AND INCLUDING NO. 8 AWG. USE STRANDED CONDUCTORS FOR WIRE ABOVE NO. 8 AWG.
25. CONNECTORS FOR POWER CONDUCTORS: CONTRACTOR SHALL USE PRESSURE TYPE INSULATED TWIST-ON CONNECTORS FOR NO. 10 AWG AND SMALLER. USE SOLDERLESS MECHANICAL TERMINAL LUGS FOR NO. 8 AWG AND LARGER.
26. SERVICE: AS SPECIFIED ON THE DRAWINGS. OWNER OR OWNER'S AGENT WILL APPLY FOR POWER. ALL PROVISIONS FOR TEMPORARY POWER WILL BE OBTAINED BY THE CONTRACTOR.
27. TELEPHONE OR FIBER SERVICE: CONTRACTOR SHALL PROVIDE EMPTY CONDUITS WITH PULL STRINGS AS INDICATED ON DRAWINGS.
28. ELECTRICAL AND TELCO/FIBER RACEWAYS TO BE BURIED A MINIMUM DEPTH OF 30", UNLESS OTHERWISE NOTED.
29. CONTRACTOR SHALL PLACE 6" WIDE DETECTABLE WARNING TAPE AT A DEPTH OF 6" BELOW GROUND AND DIRECTLY ABOVE ELECTRICAL AND TELCO SERVICE CONDUITS. CAUTIONS TAPE TO READ "CAUTION BURIED ELECTRIC" OR "BURIED TELECOM".
30. ALL BOLTS SHALL BE 3-16 STAINLESS STEEL

GROUNDING NOTES:

1. ALL HARDWARE SHALL BE 3-16 STAINLESS STEEL, INCLUDING LOCK WASHERS. COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND, AS SPECIFIED, BEFORE MATING. ALL HARDWARE SHALL BE STAINLESS STEEL 3/8 INCH DIAMETER OR SIZED TO MATCH COMPONENTS OR LOG SIZE.
2. FOR GROUND BOND TO STEEL ONLY: INSERT A CADMIUM FLAT WASHER BETWEEN LUG AND STEEL, COAT ALL SURFACES WITH AN ANTI-OXIDANT COMPOUND BEFORE MATING.
3. ALL STEEL CONDUIT SHALL BE BONDED AT BOTH ENDS WITH GROUNDING BUSHING.
4. ALL ELECTRICAL AND GROUNDING AT THE POLE SITE SHALL COMPLY WITH THE NATIONAL ELECTRICAL CODE (NEC), NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) 780 (LATEST EDITION), AND MANUFACTURER.
5. ALL DETAILS ARE SHOWN IN GENERAL TERMS. ACTUAL GROUNDING INSTALLATION AND CONSTRUCTION MAY VARY DUE TO SITE SPECIFIC CONDITIONS.
6. GROUND ALL ANTENNA BASES, FRAMES, CABLE RUNS, AND OTHER METALLIC COMPONENTS USING #6 GROUND WIRES. FOLLOW ANTENNA AND BTS MANUFACTURER'S PRACTICES FOR GROUNDING REQUIREMENTS.
7. ALL GROUND CONNECTIONS SHALL BE #6 AWG, UNLESS OTHERWISE NOTED. USE SOLID COPPER, BLACK JACKETED WIRE ON NON WOOD POLES AND SOLID TINNED COPPER, BARE (NO JACKET) WIRES ON WOOD POLES. BLACK WIRES WILL USE A SINGLE STRIPE OF GREEN ELECTRICAL TAPE WITHIN 12" OF THE CONNECTION POINTS TO IDENTIFY AS GROUNDING WIRE.
8. NOTIFY ARCHITECT/ENGINEER IF THERE ARE ANY DIFFICULTIES INSTALLING GROUNDING SYSTEM DUE TO SITE SOIL CONDITIONS.
9. ALL HORIZONTALLY RUN GROUNDING CONDUCTORS SHALL BE INSTALLED A MINIMUM OF 30" BELOW GRADE/ 6" BELOW FROST-LINE IN TRENCH, UNLESS OTHERWISE NOTED. BACK FILL SHALL BE COMPACTED AS REQUIRED BY ARCHITECT/ENGINEER.
10. ALL GROUND CONDUCTORS SHALL BE RUN AS STRAIGHT AND SHORT AS POSSIBLE, WITH A MINIMUM 12" BENDING RADIUS NOT LESS THAN 90 DEGREES.
11. ACCEPTABLE CONNECTIONS FOR GROUNDING SYSTEM SHALL BE:
- A. BURNDY, HY-GRADE U.L. LISTED CONNECTORS FOR OUTDOOR USE OR AS APPROVED BY APPLICANT PROJECT MANAGER.
- B. CADWELD, EXOTHERMIC WELDS (WELDED CONNECTIONS).
- C. ONE (1) OR (2) HOLES TINNED COPPER COMPRESSION (LONG BARREL) FITTINGS.
12. ALL CRIMPED CONNECTIONS SHALL HAVE EMBOSSED MANUFACTURER'S DIEMARK VISIBLE AT THE CRIMP (RESULTING FROM USE OF PROPER CRIMPING DEVICES) AND WEATHER-PROOFED WITH HEAT SHRINK.
13. ALL CONNECTION HARDWARE SHALL BE TYPE 3-16 STAINLESS STEEL (NOT ATTRACTED TO MAGNETS).
14. ELECTRICAL SERVICE EQUIPMENT GROUNDING SHALL COMPLY WITH NEC, ARTICLE 250-82 AND SHALL BOND ALL (E) AND NEW GROUNDING ELECTRODES. NEW GROUNDING ELECTRODE SHALL INCLUDE BUT NOT LIMITED TO GROUND RODS.

TESTING AND EQUIPMENT TURN UP REQUIREMENTS:

1. RF CABLE, DATA CABLE, RADIO EQUIPMENT AND BACK HAUL EQUIPMENT TESTING WILL COMPLY WITH CURRENT INDUSTRY STANDARDS AND OR THOSE STANDARDS OF THE EQUIPMENT MANUFACTURER OR PROVIDED TO THE CONTRACTOR PRIOR TO TESTING.
2. CONTRACTOR WILL USE THE APPROPRIATE CALIBRATED TESTING EQUIPMENT IN THE TESTING OF RF CABLE, DATA CABLE, RADIO EQUIPMENT AND BACK HAUL EQUIPMENT THAT MEET INDUSTRY STANDARDS OF THE MANUFACTURER OR THOSE STANDARDS PROVIDED TO THE CONTRACTOR PRIOR TO TESTING.

3. CONTRACTOR TO VERIFY AND RECORD ALL TEST RESULTS AND PROVIDE THESE RESULTS WITHIN THE FINAL CLOSE OUT PACKAGE.
4. ALL PERSONNEL INVOLVED IN THE TESTING OF RF CABLE, DATA CABLE, RADIO EQUIPMENT AND BACK HAUL EQUIPMENT WILL BE REQUIRED TO HAVE BEEN TRAINED AND OR CERTIFIED IN THE PROPER TESTING OF RF CABLE, DATA CABLE, RADIO EQUIPMENT AND BACK HAUL EQUIPMENT.
5. ALL TEST RESULTS SHALL BE TIME STAMPED, RECORDED AND PRESENTED PRIOR TO ENERGIZING AND TURN UP OF ANY EQUIPMENT.
6. GPS EQUIPMENT (WHEN REQUIRED) IS NOT TO BE TESTED OR ATTACHED TO ANY CABLING DURING TESTING, DOING SO WILL DAMAGE THE GPS UNIT.
7. PRIOR TO TESTING IF THE CONTRACTOR HAS ANY QUESTIONS ABOUT THE TESTING PROCEDURES THEY ARE TO CALL AND OBTAIN ASSISTANCE FROM A QUALIFIED DESIGNATED TESTING REPRESENTATIVE.
8. EQUIPMENT IS NOT TO BE ENERGIZED UNTIL ALL TESTING HAS BEEN COMPLETED, APPROVED AND THE APPROPRIATE AUTHORITY HAS BEEN NOTIFIED AND GIVES APPROVAL TO ENERGIZE THE EQUIPMENT.

SITE WORK NOTES:

1. DO NOT EXCAVATE OR DISTURB BEYOND THE PROPERTY LINES OR LEASE LINES, UNLESS OTHERWISE NOTED.
2. SIZE, LOCATION AND TYPE OF ANY UNDERGROUND UTILITIES OR IMPROVEMENTS SHALL BE ACCURATELY NOTED AND PLACED ON AS-BUILT DRAWINGS BY GENERAL CONTRACTOR AND ISSUED TO ARCHITECT/ENGINEER AT COMPLETION OF PROJECT.
3. ALL (E) UTILITIES, FACILITIES, CONDITIONS AND THEIR DIMENSIONS SHOWN ON PLANS HAVE BEEN PLOTTED FROM AVAILABLE RECORDS. THE ENGINEER AND OWNER ASSUME NO RESPONSIBILITY WHATSOEVER AS TO THE SUFFICIENCY OR ACCURACY OF THE INFORMATION SHOWN ON THE PLANS OR THE MANNER OF THEIR REMOVAL OR ADJUSTMENT. CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING EXACT LOCATION OF ALL (E) UTILITIES AND FACILITIES PRIOR TO START OF CONSTRUCTION. CONTRACTOR SHALL ALSO OBTAIN FROM EACH UTILITY COMPANY DETAILED INFORMATION RELATIVE TO WORKING SCHEDULES AND METHODS OF REMOVING OR ADJUSTING (E) UTILITIES.
4. CONTRACTOR SHALL VERIFY ALL (E) UTILITIES BOTH HORIZONTALLY AND VERTICALLY PRIOR TO START OF CONSTRUCTION. ANY DISCREPANCIES OR DOUBTS AS TO THE INTERPRETATION OF PLANS SHALL BE IMMEDIATELY REPORTED TO THE ARCHITECT/ENGINEER OR MOBILITIE CM FOR RESOLUTION AND INSTRUCTION, AND NO FURTHER WORK SHALL BE PERFORMED UNTIL THE DISCREPANCY IS CHECKED AND CORRECTED BY THE ARCHITECT/ENGINEER. FAILURE TO SECURE SUCH INSTRUCTION MEANS CONTRACTOR WILL HAVE WORKED AT THEIR OWN RISK AND EXPENSE. CONTRACTOR SHALL CALL LOCAL UTILITY LOCATE HOT LINE, SUCH AS 811, FOR UTILITY LOCATIONS A MINIMUM OF 48 HOURS PRIOR TO START OF CONSTRUCTION.
5. ALL NEW AND (E) UTILITY STRUCTURES ON SITE AND IN AREAS TO BE DISTURBED BY CONSTRUCTION SHALL BE ADJUSTED TO FINISH ELEVATIONS PRIOR TO FINAL INSPECTION OF WORK. ANY COST RELATED TO ADJUSTING (E) STRUCTURES SHALL BE BORNE SOLELY BY THE CONTRACTOR.
6. GRADING OF THE SITE WORK AREA IS TO BE SMOOTH AND CONTINUOUS IN SLOPE AND IS TO FEATHER INTO (E) GRADES AT THE GRADING LIMITS.
7. ALL TEMPORARY EXCAVATIONS FOR THE INSTALLATION OF FOUNDATIONS, UTILITIES, ETC., SHALL BE PROPERLY LAID BACK OR BRACED IN ACCORDANCE WITH CORRECT OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA) REQUIREMENTS.



120 S. RIVERSIDE PLAZA, SUITE 1800  
CHICAGO, IL 60606

OHIO EXCHANGE  
FACILITIES  
NETWORKS, LLC

PROJECT NO:	ER600221
DRAWN BY:	JDM
CHECKED BY:	MRB

C	12.04.17	JX REVISION
B	10.12.17	COMMENT REVISION
A	09.28.17	FOR REVIEW



IT IS A VIOLATION OF THE LAW FOR ANY  
PERSON, UNLESS THEY ARE ACTING UNDER THE  
DIRECTION OF A LICENSED PROFESSIONAL  
ENGINEER, TO ALTER THIS DOCUMENT

90HB002710  
C190XS842A  
COMMONS BLVD.  
BEAVERCREEK, OH 45430  
PROPOSED STEEL UTILITY POLE

SHEET TITLE  
**GENERAL NOTES**

SHEET NUMBER  
**GN-2**



SITE WORK NOTES CONT'D

8. STRUCTURAL FILLS SUPPORTING PAVEMENTS SHALL BE COMPACTED TO 95% OF MAXIMUM STANDARD PROCTOR DRY DENSITY, UNLESS OTHERWISE NOTED.
9. NEW GRADES NOT IN BUILDING AND DRIVEWAY IMPROVEMENT AREA TO BE ACHIEVED BY FILLING WITH APPROVED CLEAN FILL AND COMPACTED TO 95% OF STANDARD PROCTOR DENSITY.
10. ALL FILL SHALL BE PLACED IN UNIFORM LIFTS. THE LIFTS THICKNESS SHOULD NOT EXCEED THAT WHICH CAN BE PROPERLY COMPACTED THROUGHOUT ITS ENTIRE DEPTH WITH THE EQUIPMENT AVAILABLE.
11. ANY FILLS PLACED ON (E) SLOPES THAT ARE STEEPER THAN 10 HORIZONTAL TO 1 VERTICAL SHALL BE PROPERLY BENCHED INTO THE (E) SLOPE AS DIRECTED BY A GEOTECHNICAL ENGINEER.
12. CONTRACTOR SHALL CLEAN ENTIRE SITE AFTER CONSTRUCTION SUCH THAT NO DEBRIS, PAPER, TRASH, WEEDS, BRUSH, EXCESS FILL, OR ANY OTHER DEPOSITS WILL REMAIN. ALL MATERIALS COLLECTED DURING CLEANING OPERATIONS SHALL BE DISPOSED OF OFF-SITE BY THE GENERAL CONTRACTOR.
13. ALL TREES AND SHRUBS WHICH ARE NOT IN DIRECT CONFLICT WITH THE IMPROVEMENTS SHALL BE PROTECTED BY THE GENERAL CONTRACTOR.
14. ALL SITE WORK SHALL BE CAREFULLY COORDINATED BY GENERAL CONTRACTOR WITH LOCAL UTILITY COMPANY, TELEPHONE COMPANY, AND ANY OTHER UTILITY COMPANIES HAVING JURISDICTION OVER THIS LOCATION.

ENVIRONMENTAL NOTES:

1. ALL WORK PERFORMED SHALL BE DONE IN ACCORDANCE WITH ISSUED PERMITS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PAYMENT OF FINES AND PROPER CLEAN UP FOR AREAS IN VIOLATION.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTION AND MAINTENANCE OF EROSION AND SEDIMENTATION CONTROLS DURING CONSTRUCTION FOR PROTECTION OF ADJACENT PROPERTIES, ROADWAYS AND WATERWAYS. ALL EROSION AND SEDIMENTATION CONTROLS SHALL BE MAINTAINED IN PLACE THROUGH FINAL JURISDICTIONAL INSPECTION & RELEASE OF SITE.
3. CONTRACTOR SHALL INSTALL/CONSTRUCT ALL NECESSARY SEDIMENT/SILT CONTROL FENCING AND PROTECTIVE MEASURES AS REQUIRED BY THE LOCAL JURISDICTION WITHIN THE LIMITS OF SITE DISTURBANCE PRIOR TO CONSTRUCTION.
4. NO SEDIMENT SHALL BE ALLOWED TO EXIT THE PROPERTY. THE CONTRACTOR IS RESPONSIBLE FOR TAKING ADEQUATE MEASURES FOR CONTROLLING EROSION. ADDITIONAL SEDIMENT CONTROL FENCING MAY BE REQUIRED IN ANY AREAS SUBJECT TO EROSION.
5. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING POSITIVE DRAINAGE ON THE SITE AT ALL TIMES WITH SILT AND EROSION CONTROL MEASURES MAINTAINED ON THE DOWNSTREAM SIDE OF SITE DRAINAGE. ANY DAMAGE TO ADJACENT PROPERTY AS A RESULT OF EROSION WILL BE CORRECTED AT THE CONTRACTORS EXPENSE.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR DAILY INSPECTIONS AND ANY REPAIRS OF ALL SEDIMENT CONTROL MEASURES INCLUDING SEDIMENT REMOVAL AS NECESSARY.
7. CLEARING OF VEGETATION AND TREE REMOVAL SHALL BE ONLY AS PERMITTED AND BE HELD TO A MINIMUM. ONLY TREES NECESSARY FOR CONSTRUCTION OF THE FACILITIES SHALL BE REMOVED.
8. SEEDING AND MULCHING AND/OR SODDING OF THE SITE WILL BE ACCOMPLISHED AS SOON AS POSSIBLE AFTER COMPLETION OF THE PROJECT FACILITIES AFFECTING LAND DISTURBANCE.
9. CONTRACTOR SHALL PROVIDE ALL EROSION AND SEDIMENTATION CONTROL MEASURES AS REQUIRED BY LOCAL, COUNTY AND STATE CODES AND ORDINANCES TO PROTECT EMBANKMENTS FROM SOIL LOSS AND TO PREVENT ACCUMULATION OF SOIL AND SILT IN STREAMS AND DRAINAGE PATHS LEAVING THE CONSTRUCTION AREA. THIS MAY INCLUDE, BUT IS NOT LIMITED TO SUCH MEASURES AS SILT FENCES, STRAW BALE SEDIMENT BARRIERS, AND CHECK DAMS.
10. RIP RAP OF SIZES INDICATED SHALL CONSIST OF CLEAN, HARD, SOUND, DURABLE, UNIFORM IN QUALITY STONE FREE OF ANY DETRIMENTAL QUANTITY OF SOFT, FRIABLE, THIN, ELONGATED OR LAMINATED PIECES, DISINTEGRATED MATERIAL, ORGANIC MATTER, OIL, ALKALI, OR OTHER DELETERIOUS SUBSTANCES.

11. GC TO PLACE FILTER MATERIAL AT ALL CATCH BASINS ADJACENT TO CONSTRUCTION SITE TO PREVENT SOLID WASTE CONTAMINATION FROM ENTERING SEWER SYSTEM

FOUNDATION, EXCAVATION AND BACKFILL NOTES:

1. ALL FINAL GRADED SLOPES SHALL BE A MAXIMUM OF 3 HORIZONTAL TO 1 VERTICAL, UNLESS OTHERWISE NOTED.
2. BACKFILL OF THE POLES SHALL BE PERFORMED BASED ON THE WATER TABLE. FLOWABLE FILL MIXTURES PURCHASED FROM CONCRETE PLANTS WILL BE USED INSTEAD OF FOAM IN WATER TABLE AREAS.

A: NORMAL SOILS ORDER OF PREFERENCE – FOAM, FLOWABLE FILL, CONCRETE, COMPACTED AGGREGATES

B: HIGH WATER TABLE SOILS ORDER OF PREFERENCES – FLOWABLE FILL, CONCRETE, COMPACTED AGGREGATES.
3. ALL EXCAVATIONS PREPARED FOR PLACEMENT OF CONCRETE SHALL BE OF UNDISTURBED SOILS, SUBSTANTIALLY HORIZONTAL AND FREE FROM ANY LOOSE, UNSUITABLE MATERIAL OR FROZEN SOILS, AND WITHOUT THE PRESENCE OF POUNDING WATER. DEWATERING FOR EXCESS GROUND WATER SHALL BE PROVIDED WHEN REQUIRED. COMPACTION OF SOILS UNDER CONCRETE PAD FOUNDATIONS SHALL NOT BE LESS THAN 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY FOR THE SOIL IN ACCORDANCE WITH ASTM D1557.
4. CONCRETE FOUNDATIONS SHALL NOT BE PLACED ON ORGANIC OR UNSUITABLE MATERIAL IF ADEQUATE BEARING CAPACITY IS NOT ACHIEVED AT THE DESIGNED EXCAVATION DEPTH, THE UNSATISFACTORY SOIL SHALL BE EXCAVATED TO ITS FULL DEPTH AND EITHER BE REPLACED WITH MECHANICALLY COMPACTED GRANULAR MATERIAL OR THE EXCAVATION SHALL BE FILLED WITH CONCRETE OF THE SAME TYPE SPECIFIED FOR THE FOUNDATION. CRUSHED LIME STONE #57 MAY BE USED TO STABILIZE THE BOTTOM OF THE EXCAVATION. ANY STONE SUB BASE MATERIAL, IF USED, SHALL NOT SUBSTITUTE FOR REQUIRED THICKNESS OF CONCRETE.
5. ALL EXCAVATIONS SHALL BE CLEAN OF UNSUITABLE MATERIAL SUCH AS VEGETATION, TRASH, DEBRIS, AND SO FORTH PRIOR TO BACK FILLING. BACK FILL SHALL CONSIST OF APPROVED MATERIALS SUCH AS EARTH, LOAM, SANDY CLAY, SAND AND GRAVEL, OR SOFT SHALE, FREE FROM CLODS OR LARGE STONES OVER 2 1/2" MAX DIMENSIONS. ALL BACK FILL SHALL BE PLACED IN COMPACTED LAYERS.
6. ALL FILL MATERIALS AND FOUNDATION BACK FILL SHALL BE PLACED IN MAXIMUM 6" THICK LIFTS BEFORE COMPACTION. EACH LIFT SHALL BE WETTED IF REQUIRED AND COMPACTED TO NOT LESS THAN 95% OF THE MODIFIED PROCTOR MAXIMUM DRY DENSITY FOR SOIL IN ACCORDANCE WITH ASTM D1557.
7. NEWLY PLACED CONCRETE FOUNDATIONS SHALL CURE A MINIMUM OF 72 HRS PRIOR TO BACK FILLING.
8. FINISHED GRADING SHALL BE SLOPED TO PROVIDE POSITIVE DRAINAGE AND PREVENT STANDING WATER. THE FINAL (FINISH) ELEVATION OF SLAB FOUNDATIONS SHALL SLOPE AWAY IN ALL DIRECTIONS FROM THE CENTER. FINISH GRADE OF CONCRETE PADS SHALL BE A MAXIMUM OF 4 INCHES ABOVE FINAL FINISH GRADE ELEVATIONS. PROVIDE SURFACE FILL GRAVEL TO ESTABLISH SPECIFIED ELEVATIONS WHERE REQUIRED.
9. NEWLY GRADED GRAVEL SURFACE AREAS TO RECEIVE GRAVEL SHALL BE COVERED WITH GEOTEXTILE FABRIC TYPE: TYPAR-3401 AS MANUFACTURED BY TYPAR GEOSYNTHETICS OR AN APPROVED EQUIVALENT, SHOWN ON PLANS. THE GEOTEXTILE FABRIC SHALL BE BLACK IN COLOR TO CONTROL THE RECURRENCE OF VEGETATIVE GROWTH AND EXTEND TO WITHIN 1 FOOT OUTSIDE THE SITE FENCING OR ELECTRICAL GROUNDING SYSTEM PERIMETER WHICH EVER IS GREATER. ALL FABRIC SHALL BE COVERED WITH A MINIMUM OF 4" DEEP COMPACTED STONE OR GRAVEL AS SPECIFIED. I.E. FDOT TYPE NO. 57 FOR FENCED COMPOUND; FDOT TYPE NO. 67 FOR ACCESS DRIVE AREA, UNLESS OTHERWISE NOTED.
10. IN ALL AREAS TO RECEIVE FILL: REMOVE ALL VEGETATION, TOPSOIL, DEBRIS, WET AND UNSATISFACTORY SOIL MATERIALS, OBSTRUCTIONS, AND DELETERIOUS MATERIALS FROM GROUND SURFACE. PLOW STRIP OR BREAK UP SLOPED SURFACES STEEPER THAN 1 VERTICAL TO 4 HORIZONTAL SUCH THAT FILL MATERIAL WILL BIND WITH (E)/PREPARED SOIL SURFACE.
11. WHEN SUB GRADE OR PREPARED GROUND SURFACE HAS A DENSITY LESS THAN THAT REQUIRED FOR THE FILL MATERIAL, SCARIFY THE GROUND SURFACE TO DEPTH REQUIRED, PULVERIZE, MOISTURE-CONDITION AND/OR AERATE THE SOILS AND RECOMPACT TO THE REQUIRED DENSITY PRIOR TO PLACEMENT OF FILLS.

12. IN AREAS WHICH (E) GRAVEL SURFACING IS REMOVED OR DISTURBED DURING CONSTRUCTION OPERATIONS, REPLACE GRAVEL SURFACING TO MATCH ADJACENT GRAVEL SURFACING AND RESTORED TO THE SAME THICKNESS AND COMPACTION AS SPECIFIED. ALL RESTORED GRAVEL SURFACING SHALL BE FREE FROM CORRUGATIONS AND WAVES.
13. (E) GRAVEL SURFACING MAY NOT BE REUSED.
14. GRAVEL SUB SURFACE SHALL BE PREPARED TO REQUIRED COMPACTION AND SUB GRADE ELEVATIONS BEFORE GRAVEL SURFACING IS PLACED AND/OR RESTORED. ANY LOOSE OR DISTURBED MATERIALS SHALL BE THOROUGHLY COMPACTED AND ANY DEPRESSIONS IN THE SUB GRADE SHALL BE FILLED AND COMPACTED WITH APPROVED SELECTED MATERIAL. GRAVEL SURFACING MATERIAL SHALL NOT BE USED FOR FILLING DEPRESSIONS IN THE SUB GRADE.
15. PROTECT (E) GRAVEL SURFACING AND SUB GRADE IN AREAS WHERE EQUIPMENT LOADS WILL OPERATE. USE PLANKING 'MATTS' OR OTHER SUITABLE PROTECTION DESIGNED TO SPREAD EQUIPMENT LOADS AS MAY BE NECESSARY. REPAIR ANY DAMAGE TO (E) GRAVEL SURFACING OR SUB GRADE WHERE SUCH DAMAGE IS DUE TO THE CONTRACTORS OPERATIONS.
16. DAMAGE TO (E) STRUCTURES AND/OR UTILITIES RESULTING FROM CONTRACTORS NEGLIGENCE SHALL BE REPAIRED AND/ OR REPLACED TO THE OWNERS SATISFACTION AT NO ADDITIONAL COST TO THE CONTRACT.
17. ALL SUITABLE BORROW MATERIAL FOR BACK FILL OF THE SITE SHALL BE INCLUDED IN THE BID. EXCESS TOPSOIL AND UNSUITABLE MATERIAL SHALL BE DISPOSED OF OFF SITE AT LOCATIONS APPROVED BY GOVERNING AGENCIES AT NO ADDITIONAL COST TO THE CONTRACT.



120 S. RIVERSIDE PLAZA, SUITE 1800  
CHICAGO, IL 60606

OHIO EXCHANGE  
FACILITIES  
NETWORKS, LLC

PROJECT NO:	ER600221
DRAWN BY:	JDM
CHECKED BY:	MRB

C	12.04.17	JX REVISION
B	10.12.17	COMMENT REVISION
A	09.28.17	FOR REVIEW



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90HB002710  
C190XS842A  
COMMONS BLVD.  
BEAVERCREEK, OH 45430  
PROPOSED STEEL UTILITY POLE

SHEET TITLE  
GENERAL NOTES

SHEET NUMBER  
GN-3



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LEGEND OF SYMBOLS & ABBREVIATIONS

TOPOGRAPHIC LEGEND

- |                            |                |
|----------------------------|----------------|
| WATER VALVE                | SIGN           |
| HYDRANT                    | ELECTRIC METER |
| STORM INLET BASIN          | LIGHT POLE     |
| STORM DRAINAGE MANHOLE     | BENCHMARK      |
| ELECTRIC BOX (ACCESS)      | TELEPHONE BOX  |
|                            | CABLE BOX      |
| GAS LINE                   |                |
| UNDERGROUND ELECTRIC       |                |
| UNDERGROUND COMMUNICATIONS |                |
| RIGHT OF WAY               |                |

SURVEYOR'S NOTES:

THE PURPOSE OF THIS MAP IS TO DOCUMENT THE LOCATION OF THE EXISTING RIGHT OF WAY AS WELL AS THE HORIZONTAL AND VERTICAL POSITIONS OF THE PERMANENT FEATURES VISIBLE ON THE GROUND IN THE MAPPED AREA AS OBSERVED AT THE TIME OF THE FIELD SURVEY.

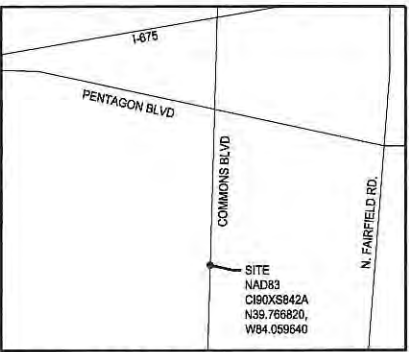
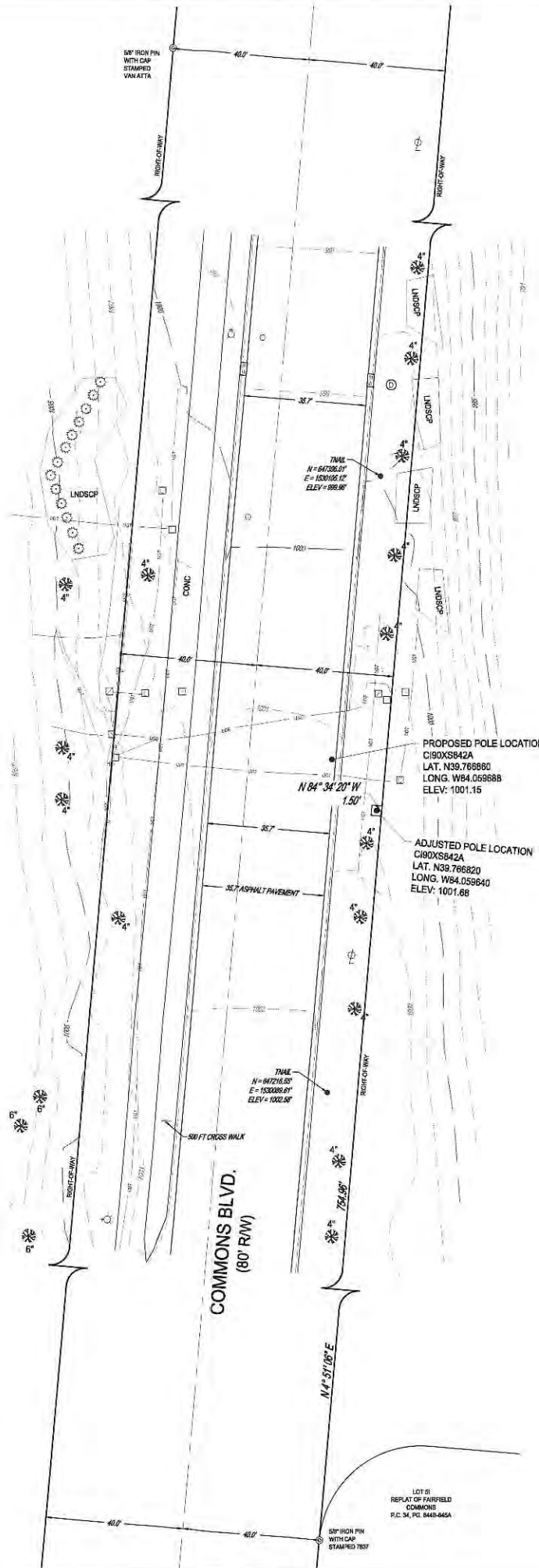
SURVEY DOES CONSTITUTE A BOUNDARY SURVEY PER OAC 4733-37. ROAD RIGHT-OF-WAY LIMITS DEPICTED HEREON WERE DERIVED FROM GIS DATA PROVIDED BY FRANKLIN COUNTY.

UTILITIES ARE SHOWN HEREON FROM OBSERVED EVIDENCE AND FIELD MARKINGS PROVIDED BY OHIO UTILITY PROTECTION SERVICE. UNDERGROUND UTILITIES MUST BE VERIFIED PRIOR TO CONSTRUCTION.

THE SURVEY WAS PREPARED WITHOUT A TITLE COMMITMENT. INFORMATION HEREON MAY BE SUBJECT TO EASEMENTS, RESTRICTIONS AND RESERVATIONS OF RECORD.

FLOOD PLAIN NOTE:

THE SUBJECT PROPERTY IS LOCATED IN ZONE X, AREA DETERMINED TO BE OUTSIDE OF FLOOD PLAIN PER F.E.M.A. MAP 39057C0018D DATED 03/17/2011.



VICINITY MAP  
N.T.S.



NO. DATE REVISION DESCRIPTION

1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

MOBILITE  
C190XS842A

(COMMONS BLVD, BEAVERCREEK, OHIO)

SITE  
TOPOGRAPHY

ISSUE:	EXISTING CONDITIONS
DATE:	REV 11/22/2017
JOB NO.:	754343-01
DESIGN:	
DRAWN:	CWS
CHECKED:	JBA
SHEET NO.:	1

BRYANT ABT, PS. (8593)  
8534 YANKEE ST., ST. 2B  
DAYTON, OH 45458-1889  
937.435.8584 XT. 1100

